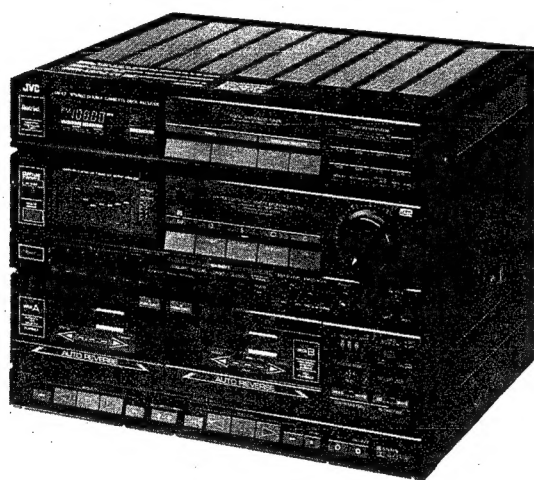


JVC

SERVICE MANUAL

STEREO DOUBLE CASSETTE DECK RECEIVER

DR-E7BK
MODEL No. DR-E7LBK



Contents

	Page		Page
Safety Precautions	1-2	Maintenance	1-20
Instruction Book		FM/MW/LW Tuner Alignment Procedures	1-21
Block Diagram		Adjustment of the Cassette Deck Section	1-22
Tuner Section	1-3	Servicing the Audio P.C.Board	1-25
Cassette Amplifier Section	1-4	Troubleshooting	1-28
Audio Section	1-5	Parts List	Separate-volume Insertion
Technical Explanations		Schematic Diagrams	
Computer-controlled S.E.A.	1-6	(1)FM/AM Tuner Section	Insertion
Mechanism Control Microcomputer	1-9	(2)FM/MW/LW Tuner Section	Insertion
Cam switch	1-10	(3)SEA & Source Selector Section	Insertion
System Control Microcomputer	1-11	(4)Power Supply Section	Insertion
COMPU-LINK terminal data transmission method	1-12	(5)Cassette & Main Amplifier Section	Insertion
Table of COMPU-LINK code	1-13	Connection Diagram	1-31
PLL Synthesizer Control Microcomputer	1-14		
Internal Block Diagrams of Major ICs	1-15		
Disassembly Procedures	1-19		

Safety Precautions

1. The design of this product contains special hardware and many circuits and components specially for safety purposes.

For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.

2. Alterations of the design or circuitry of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of the Service Manual. Electrical components having such features are identified by shading on the schematics and by (Δ) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the Parts List of the Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard.

When service is required, the original lead routing and dress should be observed, and it should be confirmed they have been returned to normal, after re-assembling.

5. Leakage current check

(Electrical shock hazard testing)

After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

Do not use a line isolation transformer during this check.

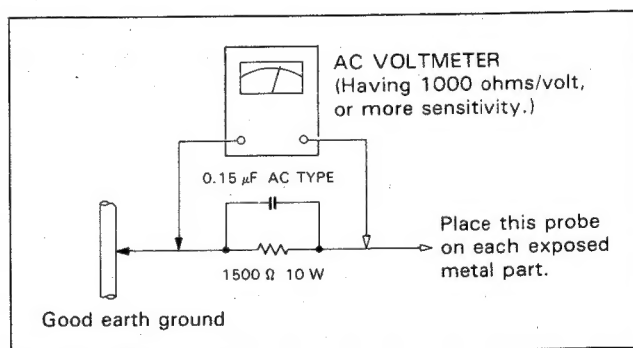
- Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5 mA AC (r.m.s.).

- Alternate check method.

Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500 Ω 10 W resistor paralleled by a 0.15 μ F AC-type capacitor between an exposed metal part and a known good earth ground.

Measure the AC voltage across the resistor with the AC voltmeter.

Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



CHECK THE VOLTAGE SELECTOR'S SETTING (Except for U.S.A., Canada, Australia, U.K. and Continental Europe)

Before inserting the power plug, please check that the voltage selector's setting corresponds with the line voltage in your area. If it doesn't, be sure to reset the voltage selector before operating this equipment. The voltage selector may be located on the rear or bottom of the unit, or underneath the platter.

CAUTION : Before setting the voltage selector to the proper voltage, disconnect the power plug.

DESCRIPTION AND FUNCTIONS

- 1 FM/AM indicator**
FM is displayed during FM reception and AM for AM.
- 2 Frequency indicator**
The tuned-in frequency is displayed digitally. Three or four digits (kHz) are displayed during AM reception and five digits (MHz) (for Europe, U.K., Australia and other countries) or four digits (MHz) (for U.S.A. and Canada) are displayed during FM reception.
- 3 PRESET STATION indicator**
This indicator will display the channel number of the selected preset stations.
- 4 FM MODE indicator**
This indicator shows AUTO or MONO according to the setting of the FM MODE/MUTE button.
- 5 FM MUTE indicator**
This indicator shows ON or OFF according to the setting of the FM MODE/MUTE button.
- 6 TUNED indicator**
If a broadcast is received correctly, this indicator lights.
- 7 STEREO indicator**
When an FM stereo broadcast is being received, this indicator lights. When the MODE indicator shows MONO even if an FM stereo broadcast is received, this indicator will not light; press the FM MODE/MUTE button so that AUTO is shown.
- 8 AUTO MEMORY indicator**
Lights when the AUTO MEMORY button is set to on.
- 9 MEMORY indicator**
This lights for about 5 seconds when the MEMORY button is pressed or 1 second when the frequency is stored in memory during auto memory.
- 10 PRESET SELECT indicator**
Selected preset channels 1 – 8 or 9 – 16 are indicated by the PRESET SELECT button.

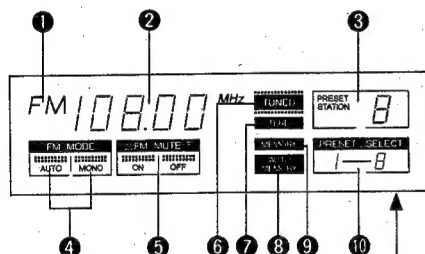
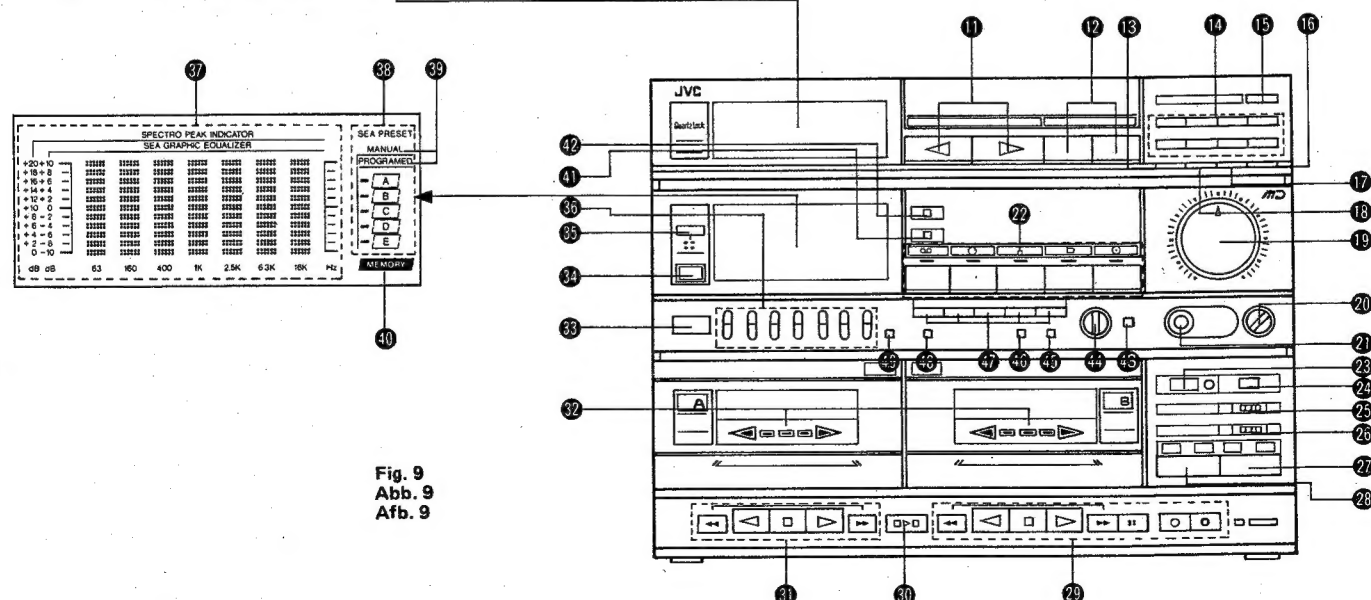
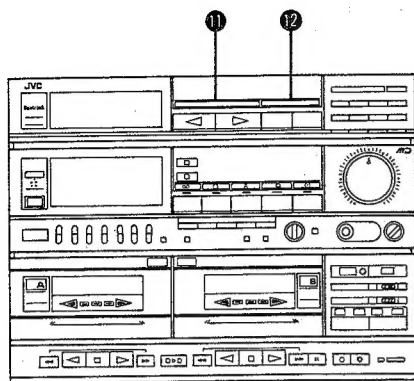


Fig. 9
Abb. 9
Afb. 9

BESCHREIBUNG UND FUNKTIONEN

- 1 FM/AM-Anzeige**
Bei FM-Empfang wird FM angezeigt, bei AM-Empfang AM.
- 2 Frequenzanzeige**
Die abgestimmte Frequenz wird digital angezeigt. Vier Ziffern (kHz) zeigen AM-Empfang an, fünf Ziffern (MHz) (für Europa, Großbritannien, Australien und andere Länder) oder vier Ziffern (MHz) (für die USA und Kanada) zeigen FM-Empfang an.
- 3 Tuner-Vorwahlanzeige (PRESET STATION)**
Diese Anzeige zeigt die Kanalnummer der gewählten Vorwahlstationen an.
- 4 UKW-Betriebsartanzeige (FM MODE)**
Diese Kontrollleuchte zeigt AUTO oder MONO an, je nach Stellung der FM MODE/MUTE Taste.
- 5 UKW-Stummabstimmanzeige (FM MUTE)**
Diese Kontrollleuchte zeigt ON (EIN) oder OFF (AUS) an, je nach Stellung der FM MODE/MUTE Taste.
- 6 Abstimmanzeige (TUNED)**
Wenn die Übertragung korrekt empfangen wird, leuchtet diese Kontrolllampe auf.
- 7 Stereoanzeige (STEREO)**
Bei Empfang einer FM-Stereo-Übertragung leuchtet diese Anzeige auf. Wenn die MODE-Kontrolllampe auch bei Empfang einer FM-Stereo-Übertragung MONO anzeigt, dann leuchtet diese Anzeige nicht auf; die FM MODE/MUTE Taste drücken, um AUTO einzustellen.
- 8 Auto-Speicherung-Anzeige (AUTO MEMORY)**
Diese Anzeige leuchtet, wenn die AUTO MEMORY-Taste auf ON steht.
- 9 Speicheranzeige (MEMORY)**
Leuchtet etwa 5 Sekunden lang auf, wenn man die MEMORY-Taste drückt, oder etwa 1 Sekunde, wenn während Auto-Memory die Frequenz gespeichert wird.
- 10 Vorwahlanzeige (PRESET SELECT)**
Der gewählte Vorwahlkanal 1 – 8 oder 9 – 16 wird gemäß der Stellung der PRESET SELECT Taste angezeigt.





11 TUNING

DOWN (<): To lower the receiving frequency, press this button.

UP (>): To raise the receiving frequency press this button.

DR-E7BK: Each time you press this button, the FM frequency will change by a 50 kHz or 100 kHz step, and AM frequency by a 9 kHz or 10 kHz step.

DR-E7LBK: Each time you press this button, the FM frequency will change by a 50 kHz step, MW by a 9 kHz step, and LW by a 1 kHz step. This unit is constructed so that MW and LW can be changed automatically by pressing the tuning button. For LW, if you want to raise the frequency, it can be changed automatically from 353 kHz to 522 kHz. Conversely, if you wish to lower the frequency, it can be automatically changed from 522 kHz to 353 kHz.

Holding either button pressed for more than 1 second and then releasing it starts auto tuning. When a broadcast is received, tuning will stop. But if either button is kept held in, scanning continues even when a broadcast is received. In auto tuning, pressing either button stops scanning. Tapping the button stops changing the frequency when the top or the bottom frequency is reached, while, in auto tuning the scanning changes direction.

11 Abstimmung (TUNING)

Nach unten (<): Zum Verringern der Empfangsfrequenz diese Taste drücken.

Nach oben (>): Zum Erhöhen der Empfangsfrequenz diese Taste drücken.

DR-E7BK: Bei jedem Druck auf diese Taste ändert sich die FM-Frequenz um jeweils 50 kHz oder 100 kHz, und die AM-Frequenz um 9 kHz oder 10 kHz.

DR-E7LBK: Bei jedem Druck auf diese Taste ändert sich die FM-Frequenz um jeweils 50 kHz, die MW-Frequenz um 9 kHz und die LW-Frequenz um 1 kHz. Durch Knopfdruck lassen sich MW und LW automatisch auf den jeweils anderen Bereich überwechseln. Wenn Sie im LW-Bereich die Frequenz erhöhen, springt sie automatisch von 353 kHz auf 522 kHz um. Wenn Sie die Frequenz dagegen verringern, springt sie automatisch von 522 kHz auf 353 kHz um. Wenn man eine der Tasten länger als 1 Sekunde gedrückt hält und dann losläßt, beginnt die automatische Abstimmung. Bei Empfang eines Senders hält der Abstimmvorgang an. Wenn man dagegen eine der Tasten gedrückt hält, wird auch bei Senderempfang weiterhin abgetastet. Während automatischer Abstimmung unterbricht die Betätigung einer der Tasten den Abstimmvorgang. Antippen der Taste unterbricht die Frequenzänderung, wenn die obere oder untere Frequenzgrenze erreicht ist. Bei automatischer Abstimmung wechseln die Frequenzsprünge in die entgegengesetzte Richtung.

Example
Beispiel
Exemple
Voorbeeld
Ejemplo

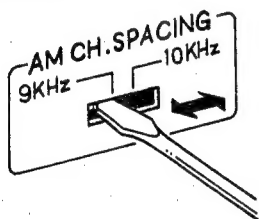


Fig. 10
Abb. 10
Afb. 10

Switch over using the tip of a screwdriver as shown in Fig. 10.

Verwenden Sie zum Umschalten die Klinge eines Schraubenziehers, siehe Abb. 10.

Changer à l'aide d'un tournevis comme indiqué dans la Fig. 10.

Schakel m.b.v. een schroevendraaier over, zoals Fig. 10 laat zien.

Conmute usando la punta de un destornillador de la manera que se ve en la Fig. 10.

Channel spacing

Band	FM	AM (MW)	AM (LW)
Area			
U.S.A., Canada	100 kHz	10 kHz	—
Europe, UK	50 kHz	9 kHz	1 kHz
Australia	50 kHz	9 kHz	—
Other areas	50 kHz	9 kHz 10 kHz	—

An AM channel spacing knob is provided on the rear panel for selecting 9 kHz or 10 kHz steps according to your area.

Switch over using the tip of a screwdriver as shown in Fig. 10. When performing this, be sure to disconnect the power cord then wait for about 1 minute to switch over the spacing knob.

12 TUNER BAND SELECTOR.

FM

Press this button to listen to the FM broadcast.

AM

Press this button to listen to the AM (MW/LW) broadcast.

Kanalabstände

Wellenbereich	UKW	AM (MW)	AM (LW)
Länder			
U.S.A., Kanada	100 kHz	10 kHz	—
Europa/Großbritannien	50 kHz	9 kHz	1 kHz
Australien	50 kHz	9 kHz	—
Andere Länder	50 kHz	9 kHz 10 kHz	—

Mit dem AM-Kanalabstandsschalter an der Rückwand lassen sich die Frequenzsprünge auf 9 kHz oder 10 kHz einstellen, je nach Land.

Die Umschaltung mit Flachklingenschraubenzieher vornehmen, wie in Abb. 10 gezeigt. Dabei ist unbedingt das Netzkabel abzuziehen und erst nach etwa 1 Minute der Abstandsschalter umzustellen.

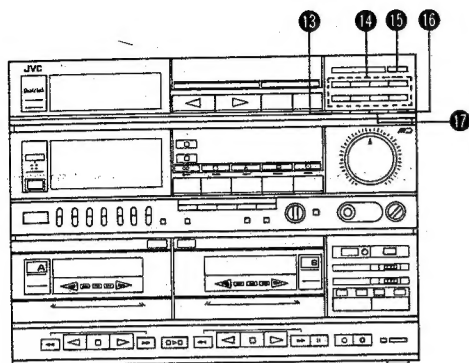
12 TUNER-FREQUENZBANDWÄHLER

UKW-Taste (FM)

Diese Taste drücken, um FM-Sendungen zu hören.

MW-Taste (AM)

Diese Tasten drücken, um FM-Sendungen (MW/LW) zu hören.



13 MEMORY

When this button is pressed, the MEMORY indicator will light for about 5 seconds to show that the memory is ready to receive preset station information. Press one of the TUNER PRESET STATIONS buttons while the MEMORY indicator is lit.

Note:

- After the MEMORY indicator has gone out, pressing the PRESET STATIONS button will not store the frequency in memory; in this case, press this button again.

14 TUNER PRESET STATIONS

These buttons are used to select one of the preset stations or to store the frequency in the memory of an individual channel. When one of these buttons is pressed, the channel number is shown by the PRESET STATION indicator. If one of these buttons is pressed while the MEMORY indicator is lit, the frequency which is being received will be stored in memory.

15 PRESET SELECT 1-8/9-16

Press to set to channels 1 — 8 or channels 9 — 16. The 1 — 8 or 9 — 16 PRESET SELECT indicator lights. Up to 16 stations for each band (FM 16, AM 16 (MW, LW random)) can be preset as required. Even when you pushed MEMORY button and then changed 1 — 8 and 9 — 16 by pressing this button, it is possible to accomplish preset memory by pressing the preset station button.

16 PRESET SCAN

This button permits the scanning of preset stations. When this button is pressed, channel 1 is tuned in, then this channel number flashes for about 5 seconds. The following channels are shown in the same way. When the desired station is received, pressing this button stops scanning so that the DR-E7BK/DR-E7LBK remains tuned to the station. After 16 stations (FM/AM) have been scanned, the frequency received before preset scanning is tuned to.

17 FM MODE/MUTE

Press this button so that AUTO of FM MODE and ON of FM MUTE light in the display for normal FM reception for automatic elimination of interstation noise. When receiving a weak or noisy FM stereo broadcast, press this button so that MONO of FM MODE and OFF of FM MUTE in the display light, the broadcast will be heard in mono but the clarity of reception will be improved.

13 Speichertaste (MEMORY)

Wenn man diese Taste drückt, leuchtet die MEMORY-Kontrollampe etwa 5 Sekunden lang auf, d.h. der Speicher ist zum Empfang von Informationen über die Vorwahlstationen bereit. Eine der TUNER PRESET STATIONS-Tasten drücken, so lange die MEMORY-Kontrollampe aufleuchtet.

Hinweis:

- Wenn die MEMORY-Kontrollampe erlischt ist, können keine Frequenzen mehr durch Drücken der PRESET STATIONS Tasten gespeichert werden; erneut diese Taste betätigen.

14 Vorwahlstationstaste (TUNER PRESET STATIONS)

Mit diesen Tasten läßt sich einer der vorgeählten Sender abrufen oder aber die Frequenz eines bestimmten Kanals speichern. Wenn man eine dieser Tasten betätigt, erscheint an der PRESET STATION Kontrollanzeige die betreffende Kanalnummer. Wenn man eine dieser Tasten bei gleichzeitig leuchtender MEMORY-Anzeige betätigt, wird die augenblickliche Empfangsfrequenz gespeichert.

15 Vorwahltaste (PRESET SELECT 1-8/9-16)

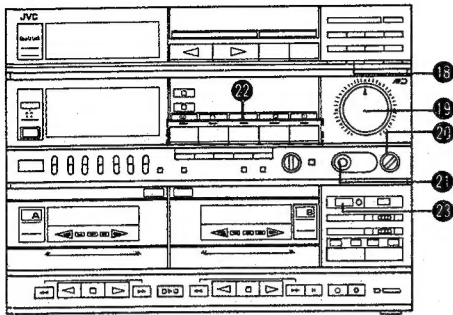
Hiermit lassen sich die Kanäle 1 — 8 oder 9 — 16 wählen. Die PRESET SELECT Kontrollampen 1 — 8 oder 9 — 16 leuchten dann auf. Bis zu 16 Stationen pro Band (FM 16, AM 16, MW/LW beliebig) können nach Wunsch voreingestellt werden. Selbst wenn die MEMORY-Taste gedrückt und 1 — 8 oder 9 — 16 durch Drücken dieser Taste angewählt wurde, ist Vorwahlspeicherung möglich, indem man einfach die entsprechende Vorwahlstationstaste drückt.

16 Vorwahlabtasttaste (PRESET SCAN)

Mit dieser Taste lassen sich die voreingestellten Sender abtasten. Bei Betätigen der Taste wird Kanal 1 abgerufen. Die Kanalnummer blinkt dann etwa 5 Sekunden lang auf. Die folgenden Kanalnummern werden ebenso angezeigt. Wenn der gewünschte Sender empfangen wird, unterbricht ein erneuter Tastendruck den Abtastvorgang, so daß der DR-E7BK/DR-E7LBK auf den gewählten Sender eingestellt bleibt. Nach Abtasten von 16 Stationen (FM/AM) wird wieder die vor dem Abtasten empfangene Sendestation eingestellt.

17 UKW-Betriebsart-/Stummabstimm taste (FM MODE/MUTE)

Wenn man diese Taste betätigt, leuchten bei normalem FM-Empfang die Kontrollampen von AUTO in FM MODE und ON in FM MUTE auf, wobei automatische Stummabstimmung erzielt wird, benachbarte Sender also unterdrückt werden. Bei Empfang einer schwachen oder gestörten FM-Stereo-Übertragung sollten Sie diese Taste so betätigen, daß die Kontrollampen MONO für FM MODE und OFF für FM MUTE anzeigen. Der Empfang ist dann zwar in Mono, die Empfangsqualität aber verbessert.



18 AUTO MEMORY

Press this button so that the AUTO MEMORY indicator lights, and press the desired TUNER PRESET STATIONS button while the AUTO MEMORY indicator is lit; the received frequency changes in the increasing direction and if there are broadcasts, PRESET STATION indicator flickers about 4 seconds. If this broadcast is not required to be stored in memory, press this button within 4 seconds; then auto memory operation starts again. After the MEMORY indicator lights for 4 seconds, its frequency is stored in the memory of desired preset station, and upscanning restarts. The same function is performed for the remaining channels.

When the frequency reached to upper limit, the auto memory function stops and the channel number in which the highest frequency is stored in memory is shown. If there is no broadcast to be tuned to the upper limit frequency is shown. When all channel memories have frequencies stored in them, the last frequency is tuned to and its channel number is shown.

Note: In the case of DR-E7LBK:

- If the auto-memory operation is started in the LW band, and frequency reaches its upper limit (353 kHz), it will automatically convert to its lowest frequency (522 kHz) on the MW band, and the auto memory operation will continue.

19 VOLUME

Use to adjust the volume of the speakers or headphones.

Note:

- Set the volume so as not to disturb your neighbors, especially late at night.

20 BALANCE

Balances the volume between the left and right speakers.

21 PHONES jack

Plug in here when using headphones.

Notes:

- Plugging in headphones switches off the sound from the speakers.
- Set the volume properly so that sound from the headphones does not hurt your ears.

22 SOURCE SELECTOR

TAPE: Press to listen to tapes.

PHONO: Press to listen to records.

TUNER: Press this button to listen to an AM (MW/LW)/FM broadcast.

VIDEO/AUX: Press this button to listen to the source connected to the VIDEO/AUX terminals.

CD: Press this button to listen to a connected compact disc player.

23 COUNTER

This display registers the position of the tape in deck B. Advancing the tape incrementally increases the tally, and rewinding the tape decreases it. Pressing the RESET button sets this display to "000".

18 Automatische Speicherung (AUTO MEMORY)

Diese Taste drücken, um die AUTO-MEMORY-Kontrollampe zum Aufleuchten zu bringen. Während die AUTO-MEMORY-Kontrollampe aufleuchtet, die gewünschte Taste von TUNER PRESET STATIONS (Vorwahlstationen) drücken. Die empfangene Frequenz ändert sich in ansteigender Richtung. Bei Empfang von Sendestationen blinkt die PRESET STATION Anzeige für ca. 4 Sekunden. Braucht der Sender nicht eingespeichert zu werden, die Taste innerhalb von 4 Sekunden drücken, darauf fängt die automatische Einspeicherung wieder an. Wenn die MEMORY Anzeige für 4 Sekunden leuchtet, wird der abgestimmte Sender gespeichert, und die Aufwärtsabstimmung beginnt von neuem. Dieselbe Funktion wird für die übrigen Kanäle durchgeführt. Erreicht die Frequenz die obere Grenze, stoppt die automatische Einspeicherungsfunktion und die Kanalnummer mit der höchsten gespeicherten Frequenz erscheint im Display. Bei nicht mit Sendefrequenzen belegtem Frequenzband erscheint die obere Grenze des Frequenzbereichs. Wenn alle Kanalspeicher Frequenzen gespeichert haben, wird die letzte Frequenz abgestimmt und die Kanalnummer erscheint im Display.

Hinweis: Im Falle von DR-E7LBK

- Wenn für das LW-Band auf automatische Speicherung (Auto-Memory) gestellt wird und die Frequenz ihre obere Grenze erreicht (353 kHz), erfolgt eine automatische Umschaltung auf die niedrigste Frequenz (522 kHz) des MW-Bands und Fortsetzung des automatischen Speicherbetriebs.

19 Lautstärkeregler (VOLUME)

Zum Einstellen der Lautstärke der Lautsprecher oder des Kopfhörers.

Hinweis:

- Die Lautstärke nur so hoch einstellen, daß andere nicht gestört werden, vor allem in der Nacht.

20 Balanceregler (BALANCE)

Zur Balanceregulierung zwischen linkem und rechtem Kanal.

21 Kopfhörerbuchse (PHONES)

Zum Anschließen eines Kopfhörers.

Hinweise:

- Wenn ein Kopfhörer angeschlossen ist, sind die Lautsprecher automatisch ausgeschaltet.
- Die Lautstärke nicht zu hoch einstellen, weil es sonst zu Gehörschäden kommen kann.

22 Signalquellentasten (SOURCE SELECTOR)

TAPE: Zum Hören von Cassetten.

PHONO: Betätigen, um auf Schallplattenwiedergabe zu schalten.

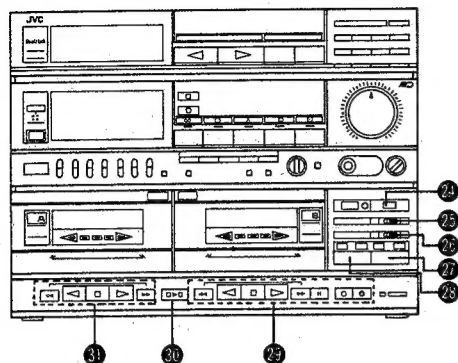
TUNER: Betätigen, um eine Radiosendung wiederzugeben (MW/LW, UKW).

VIDEO/AUX: Diese Taste betätigen, um von der an den VIDEO/AUX-Buchsen angeschlossenen Signalquelle wiederzugeben.

CD: Diese Taste betätigen, um von einem angeschlossenen CD-Player wiederzugeben.

23 Zählwerk (COUNTER)

Anzeige für das in Deck B eingelegte Band. Bei Vorwärtsrichtung wird aufwärts, bei Rückwärtsrichtung abwärts gezählt. Bei Betätigen der RESET-Taste erfolgt Rückstellung auf Anzeige "000".



24 ANRS/DOLBY B NR

ON (—): Press this button to this position when recording with the ANRS/DOLBY B NR system or playing back a tape recorded with these systems.

OFF (■): Press this button to this position when the ANRS/DOLBY B NR system is not used.

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

25 REVERSE MODE

Use to select the mode when recording or playing back using tape deck B.

: When recording or playing back one side of a tape.

: When performing continuous play or bi-directional recording.

This function is effective only for the tape in deck B.

26 TIMER

Recording or playing back at the desired time is possible using an optional timer. Normally, set this knob to OFF.

27 CD DIRECT REC

Press this button to directly record a compact disc on tape deck B.

28 CONTINUOUS PLAY

Press this button to play the tapes in deck A and deck B continuously. When this button is pressed, the indicator lights.

29 DECK B

Play (▶): Press this button to listen to the tape as it winds in the forward direction.
Play (◀): Press this button to listen to the tape's reverse side.

Fast forward/rewind

(▶▶): Press this button to quickly wind the tape from the left to the right reel.

(◀◀): Press this button to quickly wind the tape from the right to the left reel.

Stop (■): Press to stop the tape while the tape is running.

PAUSE (||): Press to temporarily stop the tape during recording or playback. To release the pause mode, press again.

REC (○): While holding this button pressed, press the (▶) or (◀) button to record.

REC MUTE (○): Press this button to create a non-recorded section between songs.

PUSH EJECT (▲): Press to load or unload a cassette.

30 HIGH SPEED DUBBING (A ▶ B)

Press this button for high-speed dubbing from tape deck A to tape deck B.

31 DECK A

For (■), (▶▶), (◀◀) and PUSH EJECT, the operation is the same as that for deck B.

Play (▶): Press this button to listen to the tape as it winds in the forward direction.

Play (◀): Press this button to listen to the tape's reverse side.

24 ANRS/DOLBY B NR-Schalter

ON (—): Für Aufnahme mit dem ANRS/DOLBY B-Rauschunterdrückungssystem oder für Wiedergabe von Cassetten, die mit diesen Systemen aufgenommen wurden, den Schalter auf diese Position stellen.

OFF (■): Den Schalter durch nochmaliges Drücken auf diese Position stellen, wenn das ANRS/DOLBY B-Rauschunterdrückungssystem nicht verwendet wird.

* Dolby Rauschunterdrückung ist hergestellt unter Lizenz von Dolby Laboratories Licensing Corporation. DOLBY und das doppel D symbol sind Warenzeichen der Dolby Laboratories Licensing Corporation.

25 Reverse-Betriebsart (REVERSE MODE)

Diese Funktion ist für das in Deck B eingelegte Band vorwählbar.

: Aufnahme/Wiedergabe einer Bandseite.

: Für kontinuierliche Wiedergabe oder Aufnahme in beide Bandrichtungen.

Diese Funktion ist nur für das in Deck B eingelegte Band verfügbar.

26 Schaltuhrschalter (TIMER)

Bei Verwendung einer geeigneten Schaltuhr können Aufnahme- oder Wiedergabevorgänge automatisch zu vorbestimmten Zeitpunkten erfolgen. Im Normalfall auf Position OFF einstellen.

27 Taste für CD-Direktaufnahme (DC DIRECT REC)

Nach Betätigen dieser Taste kann eine CD direkt auf das in Deck B eingelegte Band aufgezeichnet werden.

28 Taste für kontinuierliche Wiedergabe (CONTINUOUS PLAY)

Nach Betätigen dieser Taste werden die Bänder von Deck A und Deck B kontinuierlich wiedergegeben. Bei gedrückter Taste leuchtet die Anzeige.

29 DECK B

Wiedergabe (▶): Betätigen, um in Vorwärtsrichtung wiederzugeben.

Wiedergabe (◀): Betätigen, um in Rückwärtsrichtung wiederzugeben.

Umspulen vorwärts/rückwärts

(▶▶): Betätigen, um schnell von der linken zur rechten Nabe umzuspielen.

(◀◀): Betätigen, um schnell von der rechten zur linken Nabe umzuspielen.

Stop (■): Betätigen, um den Bandtransport zu stoppen.

Pause (||): Betätigen, um Wiedergabe oder Aufnahme kurzzeitig zu unterbrechen. Zur Abschaltung der Pausefunktion nochmals betätigen.

Aufnahme REC (○): Zum Aufnahmestart diese Taste gedrückt halten und die (▶) oder (◀) Taste betätigen.

Stummaufnahme (○): Betätigen, um unbespielte Abschnitte zwischen Titel einzufügen.

Auswurfaste (PUSH EJECT) (▲): Betätigen, um den Cassettenhalter zu öffnen.

30 Taste für High Speed Überspielen (A ▶ B)

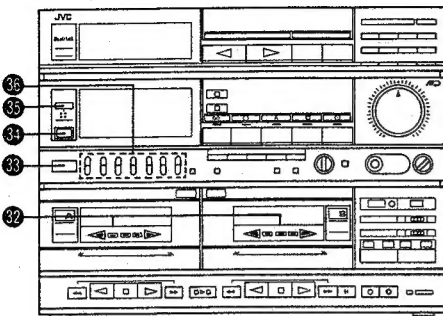
Betätigen, um in erhöhter Geschwindigkeit von Deck A zu Deck B zu überspielen.

31 DECK A

Für (■), (▶▶), (◀◀), und PUSH EJECT-Taste gelten die Angaben von Deck B.

Wiedergabe (▶): Betätigen, um in Vorwärtsrichtung wiederzugeben.

Wiedergabe (◀): Betätigen, um in Rückwärtsrichtung wiederzugeben.



32 Tape mode indicators

The indicators on the cassette holder light in order to show recording, playback and fast winding. When fast winding, the indicators flicker rapidly and when recording, the REC indicator on tape deck B lights. When the tape is stopped temporarily, the PAUSE indicator on tape deck B lights.

33 POWER

ON (—): Press this button to turn the power on. When the power is applied, the display will light and the SOURCE SELECTOR is set to TUNER unless the TIMER knob 26 is set to PLAY.

OFF (—): Set to this position to turn the power off.

34 REMOTE SENSOR

This sensor detects the signals transmitted from the remote control unit.

35 RECEIVED indicator

Lights when this unit receives signals transmitted from the remote control unit.

36 SEA LEVEL

The built-in graphic equalizer divides the audio spectrum into seven frequency bands with center frequencies from 63 Hz to 16 kHz at intervals of 4/3 octave.

When the S.E.A. level is set to '0' (center position), frequency response is flat. The response in each band can be varied by ± 10 dB by pressing the UP or DOWN SEA LEVEL buttons.

The buttons for different frequency bands can be pressed at the same time, and holding them down causes the level to continue rising or falling.

63 Hz: Raise to emphasize the very low bass response of organs, drums, and contrabass. It produces stable and solid sound with emphasis and eliminates the unclear sound response of low frequencies with de-emphasis.

160 Hz: Emphasize to obtain a more expanded low sound. De-emphasize to eliminate unclear sound caused by large or nearly empty listening rooms.

400 Hz: This frequency range is the base on which music is constructed. Emphasize to really put a punch in your music.

1 kHz: Most effective in emphasizing or de-emphasizing the human voice. Emphasize to cause the vocalist to be brought to the foreground, or de-emphasize to cause it to recede into the background.

2.5 kHz: This frequency stimulates the human ear. If the music sounds hard or metallic, de-emphasize.

6.3 kHz: Boost to add clarity to winds and strings. This frequency band varies the tonal expression, influencing the subtleties of the music.

16 kHz: Boosting this frequency range properly adds to the delicacy of highs, with cymbals and triangles resounding in a more ear-pleasing manner, and provides a feeling of extension. This frequency band can also be used to compensate for cartridge response since most moving-magnet cartridges have their resonance peaks in the frequency range from 10 kHz to 20 kHz.

32 Cassettenfunktionsanzeigen

Die Anzeigen am Cassettenhalter geben Aufnahme, Weidergabe und Umspulenbetrieb an. Bei Umspulen blinken die Anzeigen in schneller Folge, bei Aufnahme leuchtet die REC-Anzeige von Deck B. Bei Pausebetrieb leuchtet die PAUSE-Anzeige von Deck B.

33 Netztaste (POWER)

ON (—): Drücken, um das Gerät einzuschalten. Bei eingeschaltetem Gerät leuchtet das Display, der SOURCE SELECTOR ist auf TUNER eingestellt (dies gilt nicht, wenn der TIMER-Schalter 26 auf PLAY eingestellt ist).

OFF (—): Zum Ausschalten auf diese Position stellen.

34 Fernbedienungssensor (REMOTE SENSOR)

Mit diesem Sensor werden die von der Fernbedienungseinheit ausgestrahlten Signale empfangen.

35 Signalempfangsanzeige (RECEIVED)

Leuchtet bei Empfang eines von der Fernbedienungseinheit ausgestrahlten Signals.

36 SEA-Pegeltasten (SEA LEVEL)

Der eingebaute Mehrbereichsklangregler teilt das Audiospektrum in sieben Frequenzbereiche auf, mit Mittenfrequenzen von 63 Hz bis 16 kHz in Abständen von 4/3 Oktave.

Wenn die SEA-Pegelregler auf '0' (Mittelposition) eingestellt sind, ist der Frequenzgang linear. Durch Drücken der UP- und DOWN SEA LEVEL-Tasten kann der Frequenzgang in jedem Bereich um ± 10 dB verändert werden.

Die Tasten für verschiedene Frequenzbereiche können gleichzeitig gedrückt werden. Werden sie gedrückt gehalten, wird der Pegel fortlaufend erhöht bzw. vermindert.

63 Hz: Erhöhen, um die sehr tiefen Bässe von Orgel, Trommel und Kontrabass hervorzuheben. Erhöhung erzeugt einen stabilen und soliden Klang, Senkung unterdrückt die unklare Klangreproduktion von niedrigen Frequenzen.

160 Hz: Erhöhen, um einen weiteren tiefen Klang zu erhalten. Durch Senken wird der unklare Klang durch große oder fast leere Räume beseitigt.

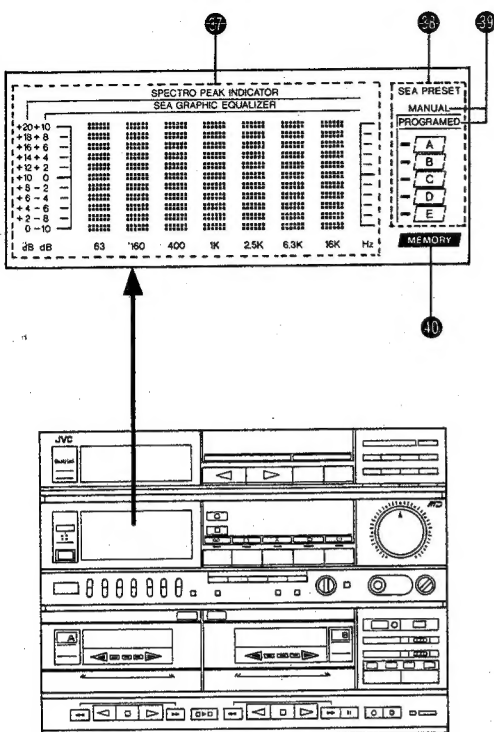
400 Hz: Dieser Frequenzbereich bildet die Grundlage jeder Musik. Durch Erhöhung kann die Musik besonders betont werden.

1 kHz: Dieser Bereich ist am wirkungsvollsten zum Hervorheben oder Dämpfen der menschlichen Stimme. Durch Erhöhung werden die Vokale in den Vordergrund und durch Senkung in den Hintergrund gebracht.

2,5 kHz: Diese Frequenz regt das menschliche Ohr an. Wenn die Musik hart oder metallisch klingt, diesen Bereich senken.

6,3 kHz: Erhöhen, um die Streich- und Blasinstrumente klarer zu machen. Dieser Frequenzbereich variiert den tonalen Ausdruck und beeinflusst die Nuancen der Musik.

16 kHz: Durch Erhöhen dieses Frequenzbereiches werden die Höhen delikater, Becken und Triangel klingen angenehmer, wodurch ein Gefühl der Erweiterung entsteht. Dieser Frequenzbereich kann auch zum Kompensieren der Frequenzgänge von Tonabnehmern verwendet werden, da die meisten magnetischen Tonabnehmer ihre Frequenzspitzen im Bereich von 10 kHz bis 20 kHz aufweisen.



**37 SPECTRO PEAK INDICATOR/SEA
GRAPHIC EQUALIZER indicator**

This display doubles as a SPECTRO PEAK INDICATOR and an SEA GRAPHIC EQUALIZER indicator, and is switched between displays by pressing the SPI/SEA button.

SPECTRO PEAK INDICATOR: The output signal is divided into seven frequency bands, whose center frequencies are identical to those of the seven SEA bands. This SPECTRO PEAK INDICATOR shows the output signal level in each frequency band. For easier viewing, the indicator is designed so that its response time is faster when rising and slower when decaying.

SEA GRAPHIC EQUALIZER: The dot point rises and falls in response to the pressing of the corresponding SEA LEVEL buttons to show the SEA level in each frequency band.

Notes:

- The SEA GRAPHIC EQUALIZER level indicator is shown for about five seconds immediately after the power is applied.
- When the SEA LEVEL, SEA PRESET, SEA FLAT, SEA REVERSE, MANUAL/PROGRAMED or SEA MEMORY button is pressed, the display shows the SPECTRO PEAK INDICATOR after five sec.

38 SEA PRESET indicator

Pressing the MANUAL/PROGRAMED button will cause indicator A, B, C, D, or E to light, according to which preset pattern was being used the last time the unit was in that particular mode (MANUAL or PROGRAMED). If no preset pattern was being used, no preset pattern indicator will light. These indicators also light when an SEA-PRESET button has been pressed, to select a preset pattern or to store a newly-created pattern in memory.

29 MANUAL/PROGRAMED indicator

Pressing the **MANUAL/PROGRAMED** button causes "MANUAL" or "PROGRAMED" to light on the display, indicating which mode has been selected.

40 MEMORY indicator

Pressing the MEMORY button lights "MEMORY" for about five seconds, thus indicating the unit is ready to store in memory the pattern you have created.

37 **Spektralspitzenpegel-Anzeige/
SEA-Mehrbereichsklangregler-Pegelanzeige
(SPECTRO PEAK INDICATOR/SEA
EQUALIZER)**

EQUALIZER/ Dieses Display dient als SPECTRO PEAK-Anzeige und als SEA GRAPHIC EQUALIZER-Pegelanzeige und läßt sich durch Drücken der Taste SPI/SEA auf die jeweils gewünschte Anzeige schalten.

SPECTRO PEAK INDICATOR: Die Ausgangssignalpegel werden für sieben Frequenzbereiche analysiert, deren Mittenfrequenzen mit denen der sieben SEA-Tasten übereinstimmen. Diese SPECTRO PEAK-Anzeige zeigt den Ausgangssignalpegel in jedem Frequenzbereich. Zum leichteren Ablesen ist die Anzeige so ausgelegt, daß die Ansprechzeit bei steigendem Pegel schneller und bei fallendem Pegel langsamer ist.

SEA GRAPHIC EQUALIZER: Der Punkt steigt und fällt entsprechend der Betätigung der zugehörigen SEA LEVEL-Taste und zeigt den SEA-Pegel in jedem Frequenzbereich an.

Hinweise:

- Unmittelbar nach Einschalten der Spannungsversorgung wird die SEA GRAPHIC EQUALIZER-Pegelanzeige für etwa fünf Sekunden angezeigt.
- Nach Betätigen der SEA LEVEL-, SEA PRESET-, SEA FLAT-, SEA REVERSE-, MANUAL/PROGRAMMED- oder SEA MEMORY- Taste erscheint nach ca. 5 Sekunden die SPECTRO PEAK INDICATOR-Anzeige.

38 SEA-Vorwahlmuster-Anzeige (SEA PRESET)

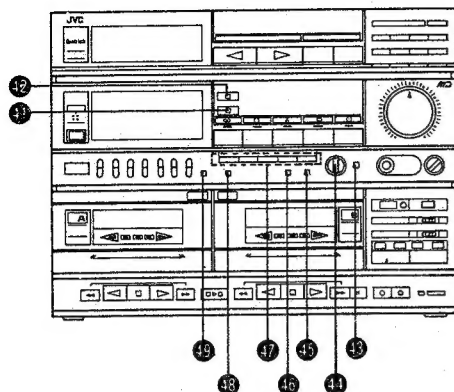
Wenn die MANUAL/PROGRAMMED-Taste gedrückt wird, leuchtet die Anzeige A, B, C, D oder E entsprechend des Vorwahlmusters, das verwendet wurde, als sich das Gerät das letzte Mal in dieser bestimmten Betriebsart (MANUAL oder PROGRAMMED) befand. Wurde kein Vorwahlmuster verwendet, leuchtet auch keine Vorwahlmuster-Anzeige. Diese Anzeigen leuchten auch nach Drücken einer SEA PRESET-Taste zum Wählen eines Vorwahlmusters oder zum Speichern eines neu eingestellten Vorwahlmusters.

39 Manuell/Programm-Anzeige
(MANUAL/PROGRAMED)

Wenn die MANUAL/PROGRAMMED-Taste gedrückt wird, leuchtet "MANUAL" oder "PROGRAMMED" auf dem Display, wodurch die gewählte Betriebsart angezeigt wird.

40 Speicher-Anzeige (MEMORY)

Wenn die MEMORY-Taste gedrückt wird, leuchtet "MEMORY" für etwa fünf Sekunden. Während dieser Zeit kann das eingestellte Muster gespeichert werden.



41 SEA

Press this button and its lamp lights. By so doing, SEA compensation for a recording/playback level can be made possible. If the SEA compensation is not necessary, press this button again and turn off its lamp. After this unit has been switched on and off, the SEA circuit is always closed.

42 SPI/SEA

Press to switch the indication between the SPECTRO PEAK INDICATOR and SEA GRAPHIC EQUALIZER level indicator.

43 STEREO MODE

You can get a feeling of sound extension by pressing this button while hearing stereo signals.

44 DISPLAY LEVEL

This knob is used to adjust the signal which is too strong or too weak while the display shows "SPECTRO PEAK INDICATOR." By this adjustment, such signal will be made easy to read.

45 REVERSE

Press this button to reverse the SEA pattern characteristics (+) and (-).

46 SEA

FLAT: Press this button for a flat response.

47 SEA PRESET

Press to store the displayed S.E.A. pattern in memory or to recall the preset S.E.A. pattern corresponding to the button pressed. While in the MANUAL mode, pressing the MEMORY button and then one of these five buttons will store the pattern you have created. Later, while in MANUAL mode, that pattern can be recalled by pressing the appropriate SEA PRESET button. Up to five original patterns can be stored for recall in this way.

A different set of S.E.A. patterns is available when in the PROGRAMED mode. These five patterns (HEAVY, CLEAR, SOFT, MOVIE, and VOCAL) have been permanently stored in memory before the unit was shipped, and may not be replaced. So, up to 10 patterns may be recalled. For more details, refer to page 53.

48 MANUAL/PROGRAMED

Press to switch between the MANUAL and PROGRAMED SEA pattern modes.

49 SEA MEMORY

Press this button and the MEMORY indicator will light for about five seconds. While it is lit, press one of the SEA PRESET buttons to store in memory the SEA pattern currently being displayed.

41 SEA

Bei Druck auf diese Taste leuchtet ihre Lampe auf. Damit ist SEA-Ausgleich des Aufnahme/Wiedergabepegels möglich. Falls kein SEA-Ausgleich gewünscht wird, die Taste erneut betätigen. Die Lampe erlischt dann.

Nach Ein- und Ausschalten des Geräts ist der SEA-Schaltkreis immer geschlossen.

42 SPI/SEA-Taste

Durch Drücken dieser Taste wird zwischen der SPECTRO PEAK INDICATOR-Anzeige und der SEA GRAPHIC EQUALIZER-Pegelanzeige umgeschaltet.

43 STEREO MODE

Bei Empfang eines Stereosignals läßt sich der Eindruck räumlichen Hörens mit dieser Taste verbessern.

44 DISPLAY LEVEL

Mit dieser Taste läßt sich der Pegel eines zu starken oder zu schwachen Signals regulieren, wenn die Anzeige "SPECTRO PEAK INDICATOR" anzeigt. Durch die Einstellung verbessert sich der Signalempfang.

45 REVERSE

Mit dieser Taste läßt sich der "+" und "-" SEA-Frequenzgang umkehren.

46 SEA-Tasten (SEA)

FLAT: Diese Taste drücken, um einen linearen Frequenzgang zu erhalten.

47 SEA-Vorwahltasten (SEA PRESET)

Diese Tasten dienen zum Speichern des angezeigten SEA-Musters oder zum Abrufen der gespeicherten SEA-Muster entsprechend den gedrückten Taste. Wenn in der MANUAL-Betriebsart die MEMORY-Taste und danach eine dieser fünf Tasten gedrückt wird, wird das eingestellte Muster gespeichert. Danach können die gespeicherten Muster in der MANUAL-Betriebsart durch Drücken der entsprechenden SEA PRESET-Taste abgerufen werden. Bis zu fünf Muster können auf diese Weise gespeichert und jederzeit abgerufen werden.

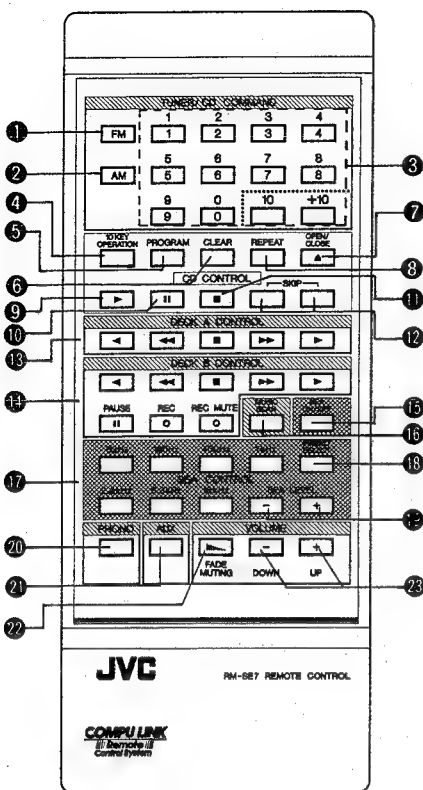
In der PROGRAMED-Betriebsart ist ein unterschiedlicher Satz SEA-Muster verfügbar. Diese fünf Muster (HEAVY, CLEAR, SOFT, MOVIE und VOCAL) sind ab Werk fest gespeichert und können nicht geändert werden. Insgesamt stehen damit 10 Muster zur Verfügung. Für weitere Einzelheiten siehe Seite 53.

48 MANUAL/PROGRAMED

Durch Drücken dieser Taste wird zwischen den SEA-Muster-Betriebsarten MANUAL und PROGRAMED umgeschaltet.

49 SEA-Speichertaste (SEA MEMORY)

Wenn diese Taste gedrückt wird, leuchtet die MEMORY-Anzeige für fünf Sekunden. Wird eine der SEA PRESET-Tasten gedrückt, während die Anzeige leuchtet, wird das gegenwärtig angezeigte SEA-Muster gespeichert.



13 DECK A CONTROL

(◀◀): Press to quickly wind the tape from the right to the left reel.
(■): Press to stop the tape.
(▶▶): Press to quickly wind the tape from the left to the right reel.
(▶): Press to play the tape in the forward direction.
(◀): Press to play the reverse side of the tape.

14 DECK B CONTROL

For (◀◀), (■) and (▶▶), the operation is the same as that for DECK A.

(▶): Press to play the tape in the forward direction.

(◀): Press to play the reverse side of the tape.

PAUSE (||): Press to stop play or recording temporarily. To start it again, press the Play button.

REC (○): While holding this button pressed, press the (▶) or (◀) button to record.

REC MUTE (○): Press this button together with the (○) button to create a non-recorded section for about 4 seconds. After this, the recording-standby mode is engaged.

15 SEA ON/OFF

Press this button to perform S.E.A.-compensation, and press it again to release this function.

16 MUSIC SCAN

Press this button together with the (▶▶) or (◀◀) of tape deck A or B to briefly play the beginning of each selection.

17 SEA CONTROL

Once the SEA CONTROL button has been pressed, a particular frequency band can be chosen with these buttons for adjustment with the SEA LEVEL buttons.

18 PRESET SELECT

Press this button to select an S.E.A. preset pattern. Each time this button is pressed, the preset pattern the equalizer is set to successively changes in this order: MANUAL A - B - C - D - E - PROGRAMED A - B - C - D - E, then returns to MANUAL A again.

19 SEA LEVEL

When the SEA CONTROL button has been pressed, these buttons can be used to adjust the S.E.A. level of the frequency band selected by the S.E.A. frequency band select buttons.

13 DECK A CONTROL

(◀◀): Betätigen, um das Band schnell von der rechten zur linken Nabe umzuspulen.
(■): Betätigen, um das Band zu stoppen.
(▶▶): Betätigen, um das Band schnell von der linken zur rechten Nabe umzuspulen.
(▶): Betätigen, um in Vorwärtsrichtung wiederzugeben.
(◀): Betätigen, um in Umkehrrichtung wiederzugeben.

14 DECK B CONTROL

Für (◀◀), (■) und (▶▶) Taste gelten die Angaben von Deck A.

(▶): Betätigen, um in Vorwärtsrichtung wiederzugeben.

(◀): Betätigen, um in Umkehrrichtung wiederzugeben.

PAUSE (||): Betätigen, um die Wiedergabe oder Aufnahme kurzzeitig zu unterbrechen. Zur Wiedergabe-/Aufnahmefortsetzung die Wiedergabetaste betätigen.

REC (○): Zum Aufnahmestart diese Taste gedrückt halten und die (▶) oder (◀) Taste betätigen.

REC MUTE (○): Zusammen mit der (○) Taste betätigen, um einen Leerabschnitt von ca. 4 Sek. Dauer einzufügen. Nach Einfügung wird auf Aufnahmebereitschaft geschaltet.

15 SEA Ein/Aus-Taste (SEA ON/OFF)

Betätigen, um auf SEA-Kompensation zu schalten. Nochmals betätigen, um diese Funktion abzuschalten.

16 Musiksuchlauf (MUSIC SCAN)

Zusammen mit der (▶▶) oder (◀◀) Taste von Deck A oder B betätigen, um Titelanfänge kurzzeitig anzuspulen.

17 SEA-REGLER (SEA CONTROL)

Nach Betätigen der SEA CONTROL-Taste kann mit diesen Tasten auf das mit den SEA LEVEL-Tasten einzustellende Frequenzband geschaltet werden.

18 Speichervorwahl-Taste (PRESET SELECT)

Diese Taste dient zum Abrufen von SEA-Vorwahlmustern. Mit jedem Drücken dieser Taste werden die Vorwahlmuster in der folgenden Reihenfolge abgerufen: MANUAL A - B - C - D - E - PROGRAMED A - B - C - D - E, und erneut auf MANUAL A.

19 SEA-Pegeltasten (SEA LEVEL)

Nach Betätigen der SEA CONTROL-Taste kann mit diesen Tasten das über die SEA-Frequenzband-Wahl-tasten bestimmte Band eingestellt werden.

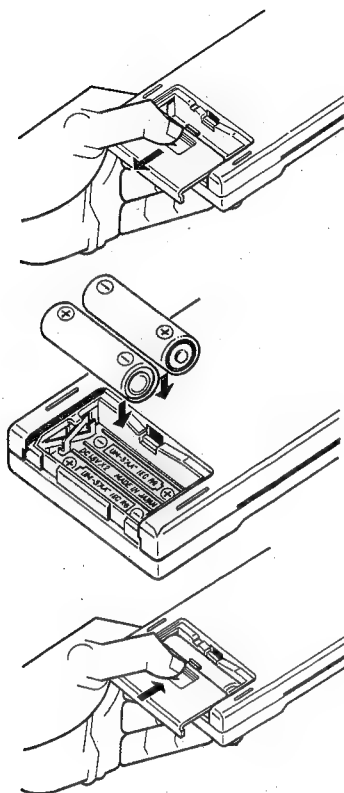


Fig. 11
Abb. 11
Afb. 11

- 20 **PHONO**
Press this button to listen to a record.
- 21 **AUX**
Press this button to listen to the source connected to the VIDEO/AUX terminals.
- 22 **FADE MUTING**
Press this button to lower the volume in steps. The volume is further decreased each time this button is pressed.
- 23 **VOLUME DOWN/UP**
Press these buttons to change the volume. To raise the volume, press the UP button. To decrease it, press the DOWN button. The volume indicator flickers.

How to use the remote control unit

• How to install batteries

1. Remove the cover on the rear of the remote control unit.
2. Install the two provided UM-3 batteries with their polarities properly placed as shown in the figure.
3. Re-install the cover.

• How to use

Operate the remote control unit (RM-SE7) deliberately and with care, while it is pointed toward the REMOTE SENSOR section on the main unit. It may be used from as far away as 23 feet (7 m). To maximize its usable distance, operate the remote control directly in front of the REMOTE SENSOR section.

• How to use the batteries

Improper use of the batteries can cause leakage or damage. So, take the following precautions:

1. Install batteries with their polarities properly placed.
2. Do not mix new and used batteries.
3. Use the same brand and type of batteries because otherwise the voltages may differ slightly.
4. If the remote control unit will not be used for a long time, remove the batteries. Also, follow the instructions on the batteries.

- 20 **Phonotaste (PHONO)**
Betätigen, um eine Schallplatte wiederzugeben.
- 21 **Aux-Taste (AUX)**
Betätigen, um von einer an den VIDEO/AUX-Buchsen angeschlossenen Signalquelle wiederzugeben.
- 22 **Tonausblendetaste (FADE MUTING)**
Betätigen, um die Lautstärke stufenweise abzusenken. Mit jedem Betätigen wird der Ton um eine Stufe aufgeblendet.
- 23 **Lautstärketasten (VOLUME DOWN/UP)**
Betätigen, um die Lautstärke zu variieren. Zur Lautstärkeerhöhung die UP-Taste, zur Lautstärkeabsenkung die DOWN-Taste betätigen. Die Lautstärkeanzeige blinkt.

Handhabung der Fernbedienungseinheit

• Einlegen der Batterien

1. Den Batteriefachdeckel an der Geräteunterseite abnehmen.
2. Die beiden mitgelieferten UM-3-Batterien unter Beachtung der Polarität wie in der Abbildung gezeigt einlegen.
3. Den Fachdeckel wieder anbringen.

• Verwendung der Fernbedienungseinheit

Fernbedienungseinheit (RM-SE7) vorsichtig handhaben. Zur Funktionsauslösung auf den REMOTE SENSOR-Bereich an der Hauptkomponente richten. Der Wirkungsbereich beträgt bis zu 7 m vom Empfangssensor. Zur Fernbedienung auch relativ weit vom Gerät entfernt möglichst in rechtem Winkel zum REMOTE SENSOR-Bereich operieren.

• Sicherheitschinnweise zum Batteriegebrauch

Unsachgemäße Handhabung und Verwendung der Batterien kann zu Auslaufen und zu Schäden führen. Die folgenden Punkte beachten:

1. Die Batterien mit korrekter Polarität einlegen.
2. Niemals frische und gebrauchte Batterien zusammen verwenden.
3. Stets die gleiche Marke und den gleichen Typ zusammen verwenden. Andernfalls können unterschiedliche Spannungen vorliegen.
4. Bei längerem Nichtgebrauch der Fernbedienungseinheit die Batterien entnehmen. Auch die auf den Batterien aufgedruckten Hinweise beachten.

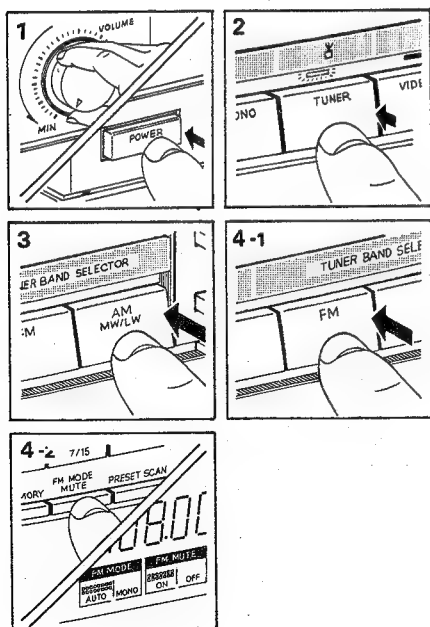
OPERATION

LISTENING TO BROADCASTS, RECORDS, OR COMPACT DISCS

1. Press the POWER button to ON (—) after setting the volume knob to minimum.
2. To listen to broadcasts press the TUNER button.
3. To listen to an AM (MW/LW) broadcast, press the AM (MW/LW) button.
- 4-1. To listen to an FM broadcast, press the FM button.
- 4-2. Press the FM MODE/MUTE button to AUTO/ON.

Notes:

- In weak signal areas, set the FM MODE/MUTE button to MONO/OFF. FM broadcasts will be heard in mono but noise is reduced.
- Depending on the broadcast being received, the CD player may cause interference if on. If this happens, turn the CD player's power off.



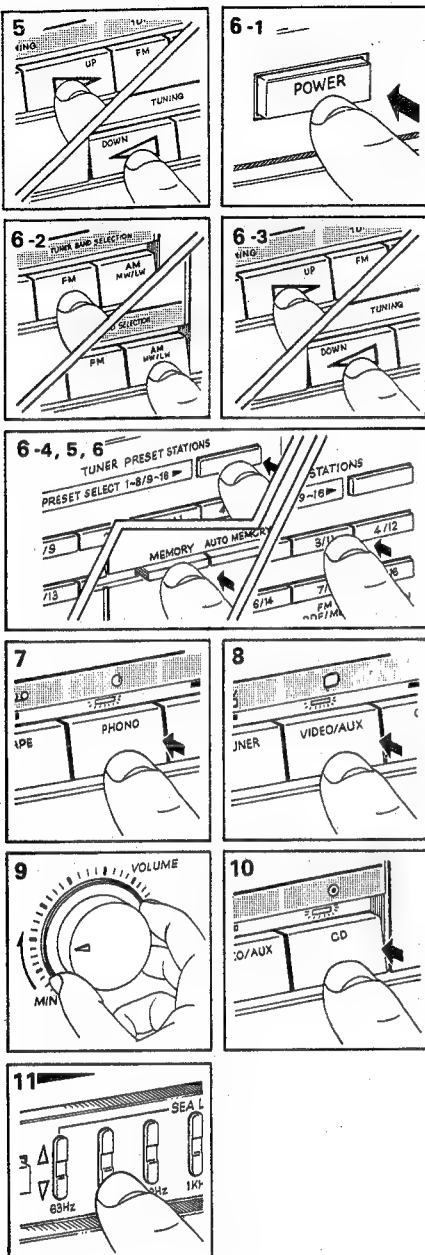
BEDIENUNG

WIEDERGABE VON RADIOSENDUNGEN, SCHALLPLATTEN, ODER COMPACT DISCS

1. Den Lautstärkereglern auf Minimum stellen, und dann den POWER-Schalter auf ON (—) drücken.
2. Zum Hören einer Sendung die TUNER-Taste betätigen.
3. Zum Hören eines MW/LW-Senders den AM (MW/LW)-Schalter drücken.
- 4-1. Zum Hören eines UKW-Senders den FM-Schalter drücken.
- 4-2. Den FM MODE/MUTE-Schalter auf AUTO/ON drücken.

Hinweise:

- In Gebieten mit schwachen Sendersignalen den FM MODE/MUTE-Schalter auf MONO/OFF stellen. Die UKW-Sender werden dann in Mono gehört, aber die Störgeräusche sind reduziert.
- Je nach Art des Sendeempfangs kann der CD-Player Interferenzstörungen verursachen. In diesem Fall den CD-Player abschalten.



5. Tune in a broadcast with the UP/DOWN TUNING button.

In areas where signals are optimum, the TUNING indicator lights, when an FM or AM (MW/LW) broadcast is received. If it is an FM stereo broadcast, the FM STEREO indicator lights.

Presetting to selected stations

- 6-1. Press the POWER button to ON (—) and check the frequency of the desired station.
- 6-2. Press the FM or AM (MW/LW) button.
- 6-3. Tune to the desired frequency by pressing the UP/DOWN TUNING button.
- 6-4. To select the preset stations 1 – 8 or 9 – 16, press the PRESET SELECT button.
- 6-5. Press the MEMORY button.
- 6-6. Press one of the TUNER PRESET STATIONS buttons within 5 seconds after pressing the MEMORY button.

Notes:

- No sound is output when the TUNER PRESET STATIONS buttons are pressed; this is to prevent noise and is not a malfunction.

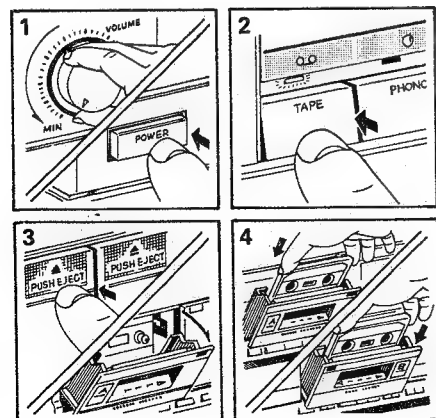
Carry out the same pretuning procedure (steps 6-3, 6-4, 6-5, 6-6) for the remaining channels. Pretuning is possible to up to 16 stations.

Press the desired TUNER PRESET STATIONS button when you want to listen to that station.

Notes:

- A total 32 stations (FM, AM (MW/LW)) can be preset by changing the setting of the PRESET SELECT button (1 – 8, 9 – 16).
- The broadcast received before the power is shut off will again be received when the power is reapplied because the memory circuit functions retain preset stations. This memory is held for about one week in normal conditions, but may be erased after exceeding this period. In this case, preset stations again.

7. To listen to a record. Press the PHONO button. Operate the turntable. Concerning the operation of the turntable, read its instruction book.
8. When listening to a source connected to the VIDEO/AUX terminals, press VIDEO/AUX button.
9. Set the volume knob to the desired level.
10. To listen to a compact disc, press the CD button.
11. After pressing the SEA button, adjust the SEA LEVEL buttons to obtain the desired tone.



LISTENING TO TAPES

1. Press the POWER button to ON (—) after setting the volume knob to minimum.
2. Press the TAPE button.

Preparation for playing back a tape

3. Either tape deck A or B can be used for playback. Press the PUSH EJECT (▲) of the tape deck selected to open the cassette door.
4. Insert cassettes with the exposed tape down.

5. Mit dem UP/DOWN TUNING-Regler einen Sender einstellen.

In Gebieten mit guten Empfangsbedingungen leuchtet die TUNING-Anzeige, wenn ein UKW- oder MW/LW-Sender empfangen wird. Wenn ein UKW-Stereosender empfangen wird, leuchtet die FM STEREO-Anzeige.

Belegung der Stationstasten

- 6-1. Die POWER-Taste auf ON (—) stellen und die Frequenz des gewünschten Senders überprüfen.
- 6-2. Die FM- oder AM (MW/LW)-Taste betätigen.
- 6-3. Durch Betätigen der UP/DOWN TUNING-Taste die gewünschte Frequenz einstellen.
- 6-4. Zur Vorwahl die PRESET-SELECT-Taste auf 1 – 8 oder 9 – 16 stellen.
- 6-5. Die MEMORY-Taste betätigen.
- 6-6. Nach Betätigen der MEMORY-Taste innerhalb von 5 Sekunden eine der TUNER PRESET STATIONS-Taste drücken.

Hinweis:

- Bei Betätigen der TUNER PRESET STATIONS-Tasten erfolgt keine Tonwiedergabe. Dies ist keine Fehlfunktion, sondern dient der Unterdrückung von Störgeräuschen.

Die Bedienschritte zur Senderprogrammierung (Schritte 6-3, 6-4, 6-5, 6-6) der übrigen Kanäle wiederholen. Bis zu 16 Sender können programmiert werden. Zur Abrufung eines programmierten Senders die entsprechende TUNER PRESET STATIONS-Taste betätigen.

Hinweise:

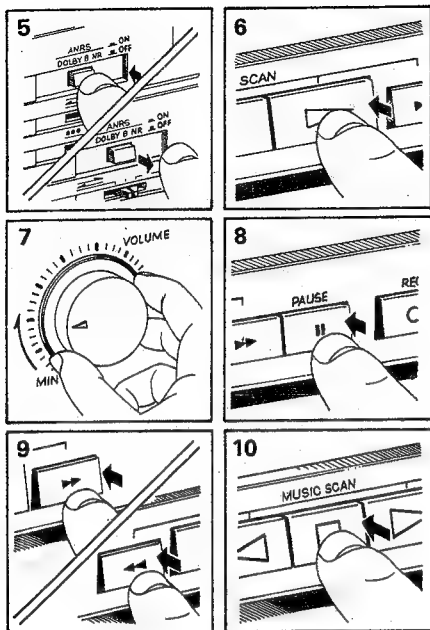
- Insgesamt können 32 Stationen (UKW, AM (MW/LW)) gespeichert werden, wenn die PRESET SELECT-Taste umgestellt wird (1 – 8, 9 – 16).
 - Der bei Geräteabschaltung eingestellte Sender ist bei Wiedereinschaltung erneut verfügbar, da ein Speicher diese Einstellung beibehält. Unter normalen Betriebsbedingungen wird diese Speicherung für ca. eine Woche beibehalten, über diesen Zeitraum hinaus erfolgt Löschung. In diesem Fall die Sender erneut speichern.
7. Zum Hören von Schallplatten den PHONO-Schalter drücken. Den Plattenspieler wie erforderlich bedienen. Siehe die Bedienungsanleitung des Plattenspielers.
 8. Zum Hören einer Signalquelle, die an den VIDEO/AUX-Buchsen angeschlossen ist, den VIDEO/AUX-Schalter drücken.
 9. Die Lautstärke wie gewünscht einstellen.
 10. Zur Wiedergabe einer Compact Disc die CD-Taste betätigen.
 11. Nach Betätigen der SEA-Taste das gewünschte Klangbild mit den SEA LEVEL-Tasten einstellen.

BANDWIEDERGABE

1. Den Lautstärkeregler auf Minimum stellen und dann den POWER-Schalter auf ON (—) drücken.
2. Die TAPE-Taste drücken.

Wiedergabe einer Cassette

3. Für Wiedergabe kann Deck A oder Deck B verwendet werden. PUSH EJECT (▲) dieses Decks drücken, um das Cassettenfach zu öffnen.
4. Cassetten mit nach unten weisender Bandöffnung einlegen.



5. If a tape recorded with ANRS or DOLBY B Noise Reduction System is used, press the ANRS/DOLBY B NR button to ON (—). If not, set this button to OFF (■). The selection of metal or normal tape is automatic for tape deck A and B.

When playing back a tape

6. Press the Play (▶) or (◀) button.
7. Set the volume to the optimum level.

Note:

- It is not possible to play tape decks A and B at the same time.

When interrupting tape play temporarily (tape deck B)

8. Press the PAUSE (||) button. To release this function, press it again.

When fast forwarding or rewinding a tape

9. To quickly wind the tape from the left to the right reel, press the (▶▶) button. To quickly wind the tape from the right to the left reel, press the (◀◀) button.

Stopping a tape

10. Press the (■) button.

Notes:

- When unloading the cassette, first press the Stop (■) button, then the PUSH EJECT (▲) button.
- When turning the power off during tape movement, cassette ejection is impossible. In this case, turn the power on and eject the cassette. During tape movement, the cassette door will not open even though the PUSH EJECT (▲) button is pressed.

5. Wenn eine Cassette verwendet wird, die mit ANRS- oder DOLBY B-Rauschunterdrückung aufgenommen wurde, den ANRS/DOLBY B NR-Schalter auf ON (—) drücken. Für Cassetten ohne Rauschunterdrückung diesen Schalter auf OFF (■) stellen. Die Wahl für Metall- oder Normalband erfolgt für Deck A und B automatisch.

Wiedergabe einer Seite

6. Die Wiedergabetaste (▶) (◀) betätigen.
7. Die Lautstärke wie gewünscht einstellen.

Hinweis:

- Deck A und Deck B können nicht gleichzeitig für Wiedergabebetrieb verwendet werden.

Unterbrechung der Wiedergabe (Deck B)

8. Die PAUSE-Taste (||) drücken. Zum Fortsetzen der Wiedergabe die Taste noch einmal drücken.

Schnellvorspulen oder Zurückspulen

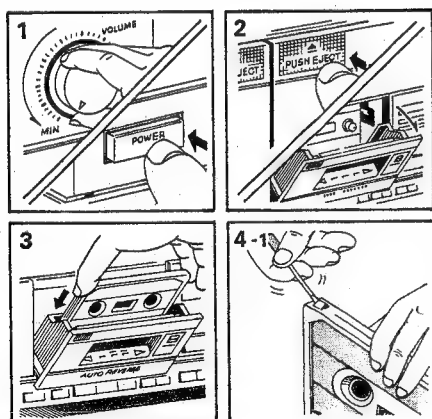
9. Zum schnellen Umspulen von linker zu rechter Nabe die (▶▶) Taste betätigen. Entsprechend für Umspulen von rechts nach links die (◀◀) Taste betätigen.

Stoppen des Bandes

10. Die (■)-Taste drücken.

Hinweise:

- Zur Cassettenentnahme zuerst die Stoptaste (■), dann die PUSH EJECT-Taste (▲) drücken.
- Wird bei stattfindendem Bandtransport die Spannungsversorgung abgeschaltet, kann die Kassette nicht ausgeworfen werden. In diesem Fall erneut einschalten und die Kassette auswerfen. Bei Bandtransport kann der Cassettenhalter nicht geöffnet werden, selbst wenn die PUSH EJECT-Taste (▲) betätigt wird.



RECORDING

Use tape deck B for recording. It is not necessary to adjust the recording level because an auto level control circuit is built into this unit.

- Press the POWER button to ON (—) after setting the volume knob to minimum.
- Press PUSH EJECT (▲) to open the cassette door. If the tape is running, press the (■) button to stop the tape and press PUSH EJECT (▲) to open the cassette door.
- Insert a cassette.

Note:

- When S.E.A. recording is not to be performed, set the SEA button to OFF.

- 4-1. Cassettes are provided with protective tabs. After recording, break the left tab with side A toward you when side A is required to be protected, for side B, break the left tab with side B toward you. This avoids accidental erasure. When a tape with its tabs broken is used, it is impossible to record on it.

AUFNAHME

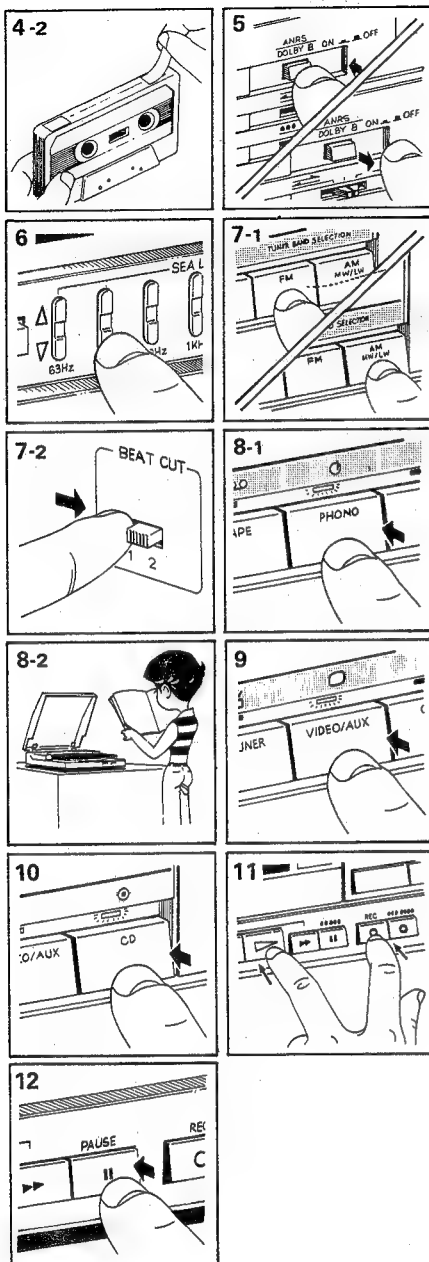
Für Aufnahme Deck B verwenden. Der Aufnahmepegel muß nicht manuell geregelt werden, da dieses Gerät über eine automatische Aufnahmeaussteuerung verfügt.

- Nach Rückstellung des Lautstärkereglers auf seine Minimalposition, die POWER-Taste auf ON (—) stellen.
- Zum Öffnen des Cassettenhalters PUSH EJECT (▲) drücken. Bei laufendem Band zuerst die (■)-Taste betätigen, dann PUSH EJECT (▲) drücken.
- Eine Cassette einlegen.

Hinweis:

- Soll ohne SEA-Effekt aufgenommen werden, mit der SEA-Taste die SEA-Funktion abschalten.

- 4-1. Cassetten sind mit Löscheschutzlaschen versehen. Soll die Aufnahme vor Löschung geschützt werden, die Lasche herausbrechen. Für Seite A die linke Lasche herausbrechen, wenn Seite A in Ihre Richtung gehalten wird, entsprechend für Seite B die linke Lasche herausbrechen wenn Seite B in Ihre Richtung gehalten wird. Eine Cassette mit entfernten Laschen kann nicht bespielt werden.



4-2. When a cassette with its tabs broken off is to be used for recording, seal the holes with adhesive tape.

Note:

- Metal and normal tapes are automatically switched.
- Using a Chrome (TYPE II) or Ferri-chrome tape is not recommended because this unit does not have the required characteristics.

5. To record with ANRS or DOLBY B Noise Reduction, set the ANRS/DOLBY B NR button to ON (—).

When performing SEA recording

6. After pressing the SEA button so that this button lights in red, adjust the SEA LEVEL buttons as required.

When recording a broadcast

7-1. Choose the desired broadcast.

For an FM broadcast, press the FM button. For an AM broadcast, press the AM (MW/LW) button.

Concerning the method of tuning the broadcast, follow steps 3 – 6 of "LISTENING TO BROADCASTS, RECORDS, OR CD" on page 29.

7-2. When recording an AM (MW/LW) broadcast, beats may occur.

Set the BEAT CUT knob located on the rear panel to "1" or "2" so that beats are eliminated.

When recording a record

8-1. Press the PHONO button.

8-2. Operate the turntable.

Concerning the operation of the turntable, refer to its instruction book.

When recording a source from the unit connected to the VIDEO/AUX.

9. Press the VIDEO/AUX button and play the unit.

When recording a compact disc

10. Press the CD button.

Concerning the operation of the CD player, refer to its instruction book.

Operation of tape deck B for recording

11. To start recording, press the Play (▶) or (◀) button while holding the REC (○) button pressed. If the REC (○) button is pressed while holding the Play (▶) or (◀) button pressed, recording is impossible.

12. To cut an unwanted part, press the PAUSE (||) button; the pause mode is set and the recording is interrupted. To restart the recording, press the Play (▶) or (◀) button.

Note:

- When tape deck A is played back while tape deck B is recording, the tape running speed may temporarily change.

4-2. Soll eine Cassette mit entfernten Laschen für Aufnahmen verwendet werden, die Öffnungen mit Klebeband abdecken.

Hinweis:

- Zwischen Metall- und Normal-Tonbandtypen wird automatisch umgeschaltet.
- Die Verwendung von Chrom- (TYPE II) oder Ferrichrombändern wird nicht empfohlen, da dieses Gerät nicht die erforderliche Voreinstellung durchführen kann.

5. Aufnahmen mit ANRS/Dolby B-Rauschunterdrückung können bei ON Position (—) des ANRS/DOLBY B NR-Schalters durchgeführt werden.

Aufnahme mit SEA-Effekt

6. Wenn nach Betätigen der SEA-Taste diese rot leuchtet, die SEA LEVEL-Taste wie erforderlich einstellen.

Aufnahme einer Radiosendung

7-1. Den gewünschten Sender einstellen.

Für UKW die FM-Taste, für AM die AM (MW/LW)-Taste betätigen.

Angaben zur Senderabstimmung siehe Seite 29, Schritte 3 – 6 von Abschnitt "WIEDERGABE VON RADIOSENDUNGEN, SCHALLPLATTEN ODER COMPACT DISCS".

7-2. Bei Aufnahme von AM (MW/LW)-Sendungen können Interferenzen auftreten. In diesem Fall den BEAT CUT-Regler an der Rückplatte auf Position "1" oder "2" stellen, um die Interferenzstörungen zu eliminieren.

Aufnahme einer Schallplatte

8-1. Die PHONO-Taste betätigen.

8-2. Den Plattenspieler betätigen.

Angaben zur Bedienung des Plattenspielers finden Sie in dessen Bedienungsanleitung.

Aufnahme einer an den VIDEO/AUX-Buchsen angeschlossenen Signalquelle

9. Die VIDEO/AUX-Taste betätigen und das angeschlossene Gerät auf Wiedergabe schalten.

Aufnahme einer Compact Disc

10. CD-Taste betätigen.

Angaben zur Bedienung des CD-Players finden Sie in dessen Bedienungsanleitung.

Aufnahmebetrieb mit Deck B

11. Zum Aufnahmestart bei gedrückt gehaltener REC-Taste (○) die (▶) oder (◀) Wiedergabetaste betätigen. Aufnahmestart ist nicht möglich, wenn die REC-Taste (○) bei gedrückt gehaltener (▶) oder (◀) Wiedergabetaste betätigt wird.

12. Zur Aufnahmeunterbrechung die PAUSE (||) Taste betätigen.

Das Gerät ist auf Pause geschaltet, es findet keine Aufnahme statt. Zur Aufnahme-fortsetzung die (▶) oder (◀) Taste betätigen.

Hinweis:

- Ist Deck A bei Aufnahmebetrieb von Deck B auf Wiedergabe geschaltet, kann die Bandlaufgeschwindigkeit zeitweise geändert werden.

ERASING

Recording on a cassette automatically erases the previous sound.

To erase without making a new recording

Set the SOURCE SELECTOR to the tape position. Then, set tape deck B to the recording mode.

CD DIRECT RECORDING

Just press the CD DIRECT REC button to simultaneously start the play of the JVC COMPU LINK CD player and recording on tape deck B. When the CD player is programmed, the selections can be recorded in the programmed order. After setting this unit to the recording-standby mode, by pressing the REC (O) and PAUSE (||) buttons simultaneously, pressing the CD button on this unit or the PLAY (▶)/PAUSE (||) button of the CD player also performs synchro recording.

Notes:

- As the source is locked to CD during synchro recording, it cannot be switched even if another source button is pressed.
- The synchro recording does not start except for when the REC (O) and PAUSE (||) buttons are pressed simultaneously to set the recording-standby mode.

NR SYSTEM

When playing a tape recorded with the NR system (ANRS/DOLBY B NR) ON, be sure to set the ANRS/DOLBY B NR button to ON.

Notes:

- When the position of the ANRS/DOLBY B NR button for playback is different from that for recording, the sound quality will be changed.
- When recording and playing back with the NR system ON, use tapes recommended on page 45 to reproduce the original music. If a tape with different characteristics is used, the sound quality may be changed.

LÖSCHEN

Bei Aufnahme wird automatisch die vorhandene Bespielung gelöscht.

Löschung ohne Neuaufnahme

Den SOURCE SELECTOR auf die Position für Band einstellen. Dann Deck B auf Aufnahme schalten.

CD-DIREKTAUFNAHME

Zum gleichzeitigen Wiedergabestart des JVC COMPU LINK CD-Players und Aufnahmebestart bei Deck B muß nur die CD DIRECT REC-Taste betätigt werden. Bei entsprechender CD-Player-Programmierung erfolgt die Aufnahme der Titel in vorbestimmter Reihenfolge. Ist dieses Gerät auf Aufnahmebereitschaft geschaltet (durch gleichzeitiges Betätigen der REC (O) und PAUSE (||)-Taste), erfolgt Synchroaufnahme auch nach Betätigen der CD-Taste an diesem Gerät, bzw. der PLAY (▶)/PAUSE (||)-Taste am CD-Player.

Hinweise:

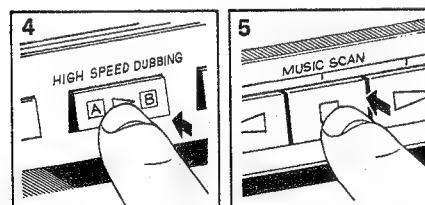
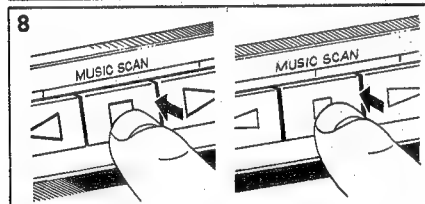
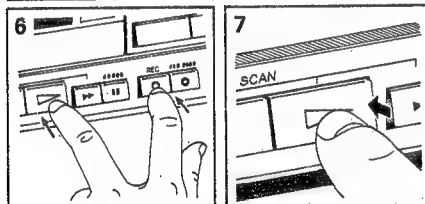
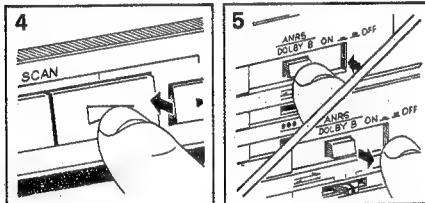
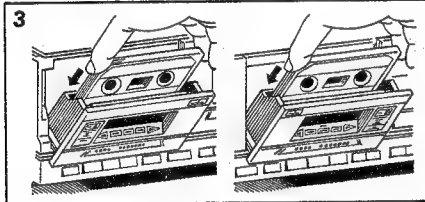
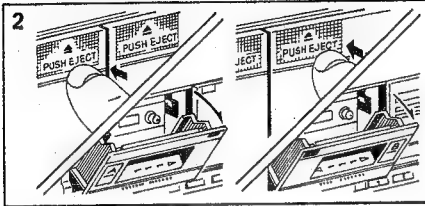
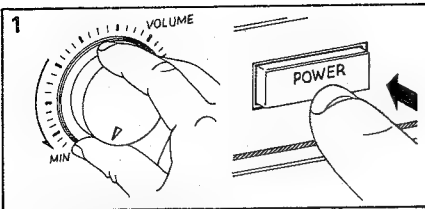
- Da bei Synchroaufnahme auf Signalquelle CD verriegelt wird, erfolgt auch keine Umschaltung, wenn eine Signalquellentaste betätigt wird.
- Die Synchroaufnahme startet nur dann, wenn mit REC (O) und PAUSE (||) gleichzeitig auf Aufnahmebereitschaft geschaltet wird.

RAUSCHUNTERDRÜCKUNGSSYSTEM

Wenn ein mit Rauschunterdrückung (ANRS/DOLBY B NR) bespieltes Band wiedergegeben wird, das Rauschunterdrückungssystem ANRS/DOLBY B NR-Taste einschalten.

Hinweise:

- Wenn bei Wiedergabe nicht die Rauschunterdrückung verwendet wird, die bei der Aufnahme benutzt wurde, kann die Klangqualität beeinträchtigt werden.
- Zur Aufnahme und Wiedergabe mit Rauschunterdrückung die auf Seite 45 empfohlenen Bänder verwenden, um einen unverfälschte Klangqualität zu erzielen.
Bei Bändern mit abweichenden Kenndaten kann die Klangqualität unzureichend sein.



DUBBING

Normal speed dubbing

Dubbing means to copy a tape to another tape. Dubbing can be done from tape deck A to tape deck B.

1. Press the POWER button to ON (—) after setting the VOLUME knob to minimum.
2. Press the PUSH EJECT (▲) buttons of tape deck A and B to open the cassette doors.
3. Insert cassettes.
4. Press the (▶) or (◀) button of tape deck A to scan to the tune to be copied.
5. Set the ANRS/DOLBY B NR button to OFF.
6. Set tape deck B to the record mode (press the (▶) or (◀) button while holding the REC (○) button pressed).
7. Set tape deck A to the play mode (press the (▶) or (◀) button).
8. To release the dubbing mode, press the Stop (■) buttons of both tape deck A and B.

Note:

- Pressing the source select buttons during dubbing switches the source for recording.

High speed dubbing

Steps 1, 2, and 3 are the same as for normal speed dubbing.

4. Press the HIGH SPEED DUBBING (A ▶ B) button. During dubbing, the volume, tone or source selector may be set to any setting. For example, dubbing can be performed while listening to a broadcast.
5. To stop dubbing, press the Stop (■) button of tape deck B.

Notes:

- When stopping high speed dubbing with the Stop (■) button of tape deck A, tape deck B enters the record mute mode for about 4 seconds, then the REC/PAUSE mode with the high speed dubbing mode engaged.
- The S.E.A. recording is impossible during high speed dubbing.
- During high speed dubbing, the recording is performed with the same NR mode as the played tape in tape deck A regardless of the setting of the ANRS/DOLBY B NR button.
- Certain televisions may be affected by this unit during high speed dubbing. If this happens, turn the power of the TV off or move this unit away from the TV.

Notes for dubbing

- It is recommended to use the same type of tape for tape decks A and B because otherwise the recording level may be too high.
- As the tape for recording may not be enough due to differences in tape speed between tape deck A and tape deck B and variations in tape length etc., use a tape with enough length for recording.

ÜBERSPIELEN

Überspielen bei Normalgeschwindigkeit

Überspielen bedeutet Kopieren einer Bandaufnahme.

Überspielen ist von Deck A auf Deck B möglich.

1. Nach Rückstellung des Lautstärkereglers auf seine Minimalposition die POWER-Taste auf ON (—) stellen.
2. Zum Öffnen der Cassettenhalter PUSH EJECT (▲) von Deck A und B betätigen.
3. Cassetten einlegen.
4. Zur Auswahl des zu kopierenden Titels die (▶) oder (◀) Taste von Deck A betätigen.
5. Die ANRS/DOLBY B NR-Taste auf OFF einstellen.
6. Deck B auf Aufnahme schalten: Bei gedrückt gehaltener REC-Taste (▶) (◀) oder (○) Wiedergabetaste betätigen.
7. Deck A auf Wiedergabe schalten (die (▶)- oder (◀) Taste betätigen).
8. Zur Abschaltung der Überspielfunktion bei Deck A und Deck B die Stop-Taste (■) betätigen.

Hinweis:

- Durch Betätigen der Signalquellenschalter wird die Zuspieldquelle bei Überspielbetrieb umgeschaltet.

Überspielen bei erhöhter Geschwindigkeit

Schritte 1, 2 und 3 entsprechen den Angaben für Überspielen in Normalgeschwindigkeit.

4. Die Taste für High Speed-Überspielen (A ▶ B) betätigen. Während Überspielbetrieb können Lautstärke, Ton und Signalquelle beliebig gewählt werden. Während des Überspielbetriebs kann zum Beispiel auf Radiowiedergabe geschaltet werden.
5. Zur Abschaltung der Überspielfunktion die Stop-Taste (■) von Deck B betätigen.

Hinweise:

- Wenn der High Speed-Überspielbetrieb mit der Stop-Taste von Deck A beendet wird, schaltet Deck B für 4 Sekunden auf Stumm-aufnahme. Hierauf wird auf Aufnahmepause für High Speed-Überspielbetrieb geschaltet.
- Bei High Speed-Überspielen ist keine SEA-Aufnahme möglich.
- Bei High Speed-Überspielbetrieb erfolgt die Aufnahme mit der Rauschunterdrückung des Zuspieldbandes in Deck A, ungeachtet von der Einstellung der ANRS/DOLBY B NR-Taste.
- Bei High Speed-Überspielbetrieb können unter Umständen nahe aufgestellte TV-Geräte gestört werden. In diesem Fall das TV-Gerät abschalten oder dieses Gerät in ausreichender Entfernung vom TV-Gerät aufstellen.

Hinweise zum Überspielbetrieb

- In Deck A und B Cassetten mit identischen Bandsorten einlegen. Andernfalls kann der Aufnahmepegel zu hoch ausfallen.
- Auf ausreichende Länge des Aufnahmebands achten, da die Bandlaufgeschwindigkeiten zwischen Deck A und B differieren können, unterschiedliche Bandlängen vorliegen können etc.

AUTO REVERSE FUNCTION

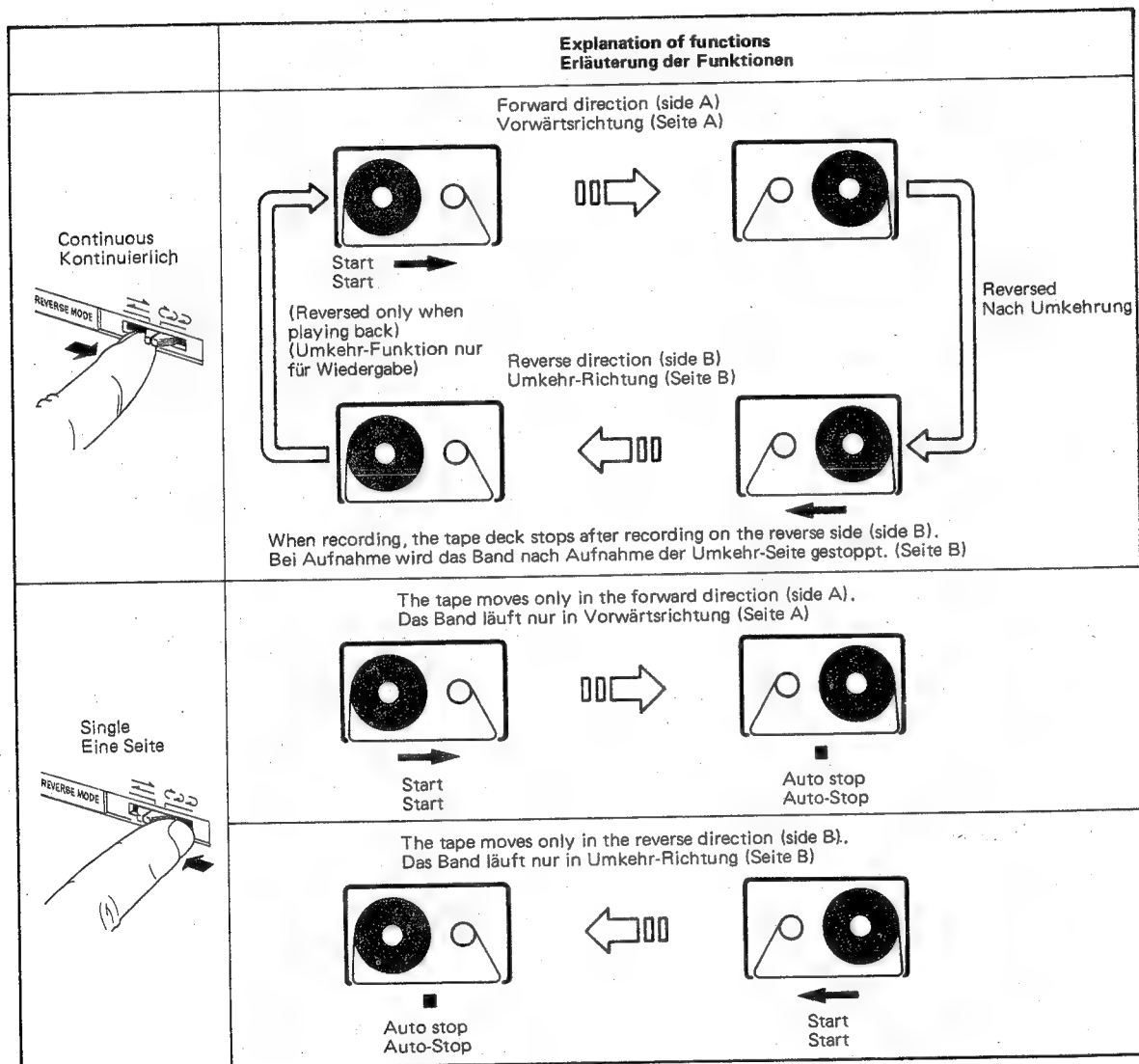
Tape deck B has the auto reverse function.

- The following explains how this function operates when a cassette is inserted in the cassette holder with side A facing out.
- Tape deck A is placed in the consecutive playback mode because of the auto reverse system.

AUTOREVERSE-FUNKTION

Deck B besitzt eine Autoreverse-Betriebsart.

- Im folgenden wird diese Funktion unter der Annahme erläutert, daß eine Cassette mit nach außen weisender Seite A eingelegt ist.
- Cassettendeck A wird wegen des automatischen Umkehrsystems auf fortlaufen de Wiedergabe geschaltet.



Notes:

- A tape without a tab does not run when the recording operation is performed. Make sure that a cassette has protective tabs when recording on both sides.
- Be sure to use a cassette with side A facing out to ensure high-quality sound and to avoid accidental erasure.
- Due to minor differences between cassette case halves, recordings made on a particular side will be best reproduced when played back in the same direction as they were recorded in.

Hinweise:

- Bei einer Kassette ohne Sicherheitszunge kann nicht auf Aufnahme geschaltet werden. Vor Aufnahme auf beide Seiten sicherstellen, daß beide Kassetten-Sicherheitszungen vorhanden sind.
- Darauf achten, Kassetten stets mit Seite A nach außen weisend einzulegen, um hohe Klangqualität zu gewährleisten und um versehentliche Löschungen zu vermeiden.
- Infolge minimaler Ungleichheiten zwischen beiden Kassettengehäusehälften sollten Kassetten in der bei der Aufnahme verwendeten Richtung abgespielt werden.

Remarques:

- Une bande sans languette ne défile pas quand l'enregistrement est exécuté. S'assurer qu'une cassette a ses languettes de sécurité en enregistrant sur les deux faces.
- S'assurer d'utiliser une cassette avec la face A placée vers l'extérieur pour garantir un son de haute qualité et pour éviter des effacements accidentels.
- A cause de faibles différences entre les deux côtés de la coque des cassettes, des enregistrements effectués sur une face particulière seront mieux reproduits si la lecture est faite dans la même direction que celle lors de l'enregistrement.

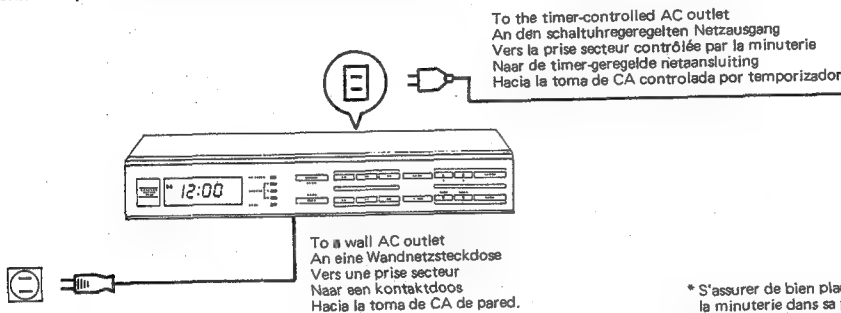
UNATTENDED RECORDING OR PLAYBACK USING THE TIMER

- Recording or playback may be controlled using an optional audio timer.
- If the timer is provided with the capability for repeated on/off switching, recording or playback may be repeated.
- Before using this unit, also read the timer's instruction book.
- Recording of a cassette without a tab is not possible.

UNÜBERWACHTE AUFNAHMEN ODER SCHALTUHRGESTEUERTE WIEDERGABE

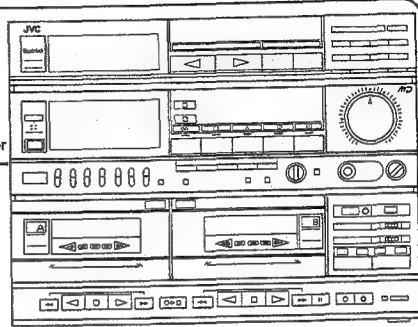
- Aufnahme und Wiedergabe können auch über eine geeignete Schaltuhr geregelt werden.
- Falls die Schaltuhr für wiederholte Ein-/Aus-schaltung geeignet ist, können entsprechend Aufnahme- und Wiedergabe vorgänge wiederholt durchgeführt werden.
- Vor Gebrauch der Schaltuhr deren Bedienungsanleitung durchlesen.
- Aufnahme mit einer Kassette, die keine Sicherheitszunge(n) mehr vorweist, ist nicht möglich.

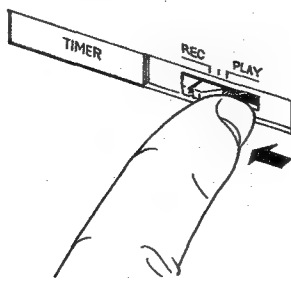
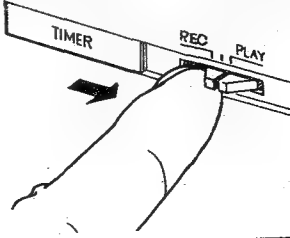
**• How to connect to the timer/Anschluß der Schaltuhr/Raccordement à la minuterie
Aansluiten op de timer/Cómo conectar el temporizador**



- * Be sure to set the power button of the unit to be switched on or off by the timer to its "on" position.
- * Sicherstellen, daß das von der Schaltuhr geregelte Gerät eingeschaltet ist.

- * S'assurer de bien placer la touche d'alimentation de l'appareil à commuter par la minuterie dans sa position "marche".
- * Zorg ervoor de spanningschakelaar van het in en uit te schakelen toestel in de "aan" stand te zetten.
- * Asegúrese de ajustar la tecla de alimentación de la unidad a ser conectada o desconectada por el temporizador en la posición "activada".



Process Vorgang	Unattended recording Unüberwachte Aufnahme	Playback as an alarm (timer playback) Wiedergabe als Weckfunktion (Schaltuhrwiedergabe)
1. Timer operation Schaltuhrbetrieb	<ul style="list-style-type: none">• Make sure that the power buttons of the units connected to the timer are set to their "on" positions.• Turn on the timer's power.• Sicherstellen, daß die an der Schaltuhr angeschlossenen Geräte eingeschaltet sind.• Die Schaltuhr einschalten.	
2. Operation of amplifier and tuner sections Handhabung von Verstärker und Tuner	<ul style="list-style-type: none">• Set the Tuner button on.• Tune to the broadcast to be listened to.• S.E.A. recording is impossible when timer recording is performed.• Die Tunertaste betätigen.• Den gewünschten Sender einstellen.• Bei Schaltuhr-gesteuerter Aufnahme ist keine SEA-Aufnahme möglich.	<ul style="list-style-type: none">• Adjust the volume. (During timer playback, the S.E.A. circuit is set to OFF.)• Die Lautstärke regeln. (Bei Schaltuhr-gesteuerter Wiedergabe ist die SEA-Schaltung abgeschaltet.)
3. Tape deck operation Kassettendeck Handhabung	<ul style="list-style-type: none">• Insert a cassette for recording in tape deck B and prepare for recording.• Setting the REVERSE MODE knob to "↔" allows the bi-directional recording.• Set the TIMER knob to REC.• Die zu bespielende Kassette in Deck B einlegen und die für Aufnahme erforderlichen Bedienschritte vornehmen.• Bei Position "↔" des REVERSE MODE-Schalters ist Aufnahme auf beiden Seiten möglich.• Den TIMER-Schalter auf REC einstellen. 	<ul style="list-style-type: none">• Insert the cassette to be listened to in tape deck A or B.• If cassettes are loaded in both tape decks, only the tape in tape deck B will be played. To play a tape in tape deck A, load only deck A with a cassette.• For tape deck B, if the REVERSE MODE knob is set to "↔", continuous play is possible.• Die abzuspielende Kassette in Deck A oder B einlegen.• Werden Kassetten in beide Decks eingelegt, erfolgt nur für Deck B Wiedergabe. Soll von Deck A wiedergegeben werden, nur in Deck A eine Kassette einlegen.• Mit Deck B ist bei Position "↔" des REVERSE MODE-Schalters kontinuierliche Wiedergabe möglich. 

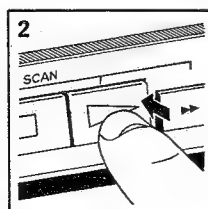
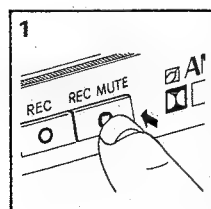
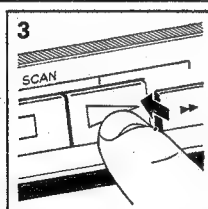
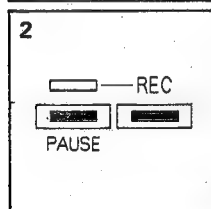
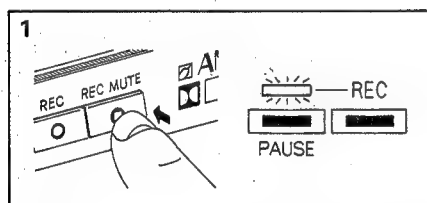
Process Vorgang	Unattended recording Unüberwachte Aufnahme	Playback as an alarm (timer playback) Wiedergabe als Weckfunktion (Schaltuhrwiedergabe)
4. Timer operation Schaltuhrbetrieb	<ul style="list-style-type: none"> Set the switch-on and switch-off times for recording or playback. Make sure that the power of the connected units is turned off by the timer while keeping the POWER button of this unit set to ON. Die Ein- und Abschaltzeit für Aufnahme oder Wiedergabe voreinstellen. Sicherstellen, daß bei eingeschalteter Netzspannung dieses Geräts die Spannungsversorgung der angeschlossenen Geräte von der Schaltuhr abgeschaltet wird. 	
	<p>...</p> <ul style="list-style-type: none"> The recording will start at the preset switch-on time. Die Aufnahme startet zur voreingestellten Zeit. 	<p>...</p> <ul style="list-style-type: none"> Playback will start at the preset switch-on time. Die Wiedergabe startet zur voreingestellten Zeit.

Notes:

- Turn the power off after setting tape decks A and B to the stop mode.
- Be sure to set the **TIMER** knob to **OFF** after the recording has been performed.
- When the tuner is to be used as an alarm, set the **TIMER** knob to **OFF**.

Hinweise:

- Deck A und B auf Stop schalten und die Spannungsversorgung abschalten.
- Nach Aufnahme den **TIMER**-Schalter auf **OFF** einstellen.
- Soll der Tuner für die Weckfunktion verwendet werden, den **TIMER**-Schalter auf **OFF** schalten.



HOW TO USE THE AUTOMATIC RECORD MUTE FUNCTION

By using the REC MUTE (●) button, it is possible to erase an undesired section or create a non-recorded section between songs while recording.

- To automatically create a non-recorded section of about 4 – 5 seconds.**

- When the non-recorded section is to be created while recording.
- 1. Press the REC MUTE (●) button and release it. The REC indicator blinks and a non-recorded section is created.
- 2. After about 4 – 5 seconds, the tape stops automatically and the recording-standby mode is engaged.
- 3. To start recording again, press the Play button. By pressing the REC MUTE (●) button again while the non-recorded section is being created, the non-recorded section will automatically be extended about 4 – 5 seconds beyond the point at which the REC MUTE button was pressed.

- To create a non-recorded section of more than 4 – 5 seconds.**

- When the non-recorded section is to be created while recording.
- 1. Hold the REC MUTE (●) button pressed for as long as the blank section is to be, and then release it. The recording-standby mode is then engaged.
- 2. To start recording again, press the Play button.

VERWENDUNG DER STUMMAUFNAHME-FUNKTION

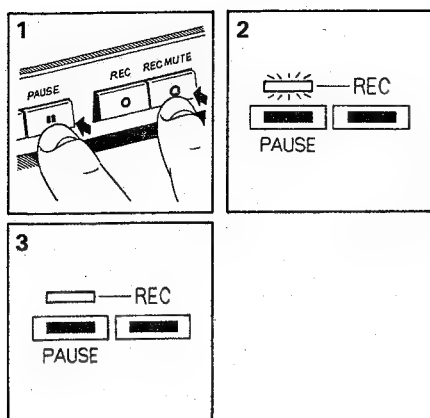
Mit der Stummaufnahmetaste (●) können ungewünschte Abschnitte gelöscht, bzw. bei Aufnahme zwischen den Titeln Leerabschnitte eingefügt werden.

- Herstellung eines unbespielten Abschnitts von 4 bis 5 Sekunden Länge.**

- Leerabschnitteinfügung bei Aufnahme
- 1. Die Stummaufnahmetaste (●) kurz drücken. Die REC-Anzeige blinkt, es erfolgt Stummaufnahme.
- 2. Nach ca. 4 bis 5 Sekunden stoppt das Band automatisch, und das Gerät schaltet auf Aufnahmebereitschaft.
- 3. Zur Aufnahme fortsetzung die Wiedergabetaste betätigen. Wird die Stummaufnahmetaste (●) während der Stummaufnahme betätigt, wird der Leerabschnitt ab diesem Zeitpunkt um ca. 4 bis 5 Sekunden verlängert.

- Herstellung eines unbespielten Abschnitts von über 4 – 5 Sekunden.**

- Leerabschnitteinfügung bei Aufnahme
- 1. Die Stummaufnahmetaste (●) für die beabsichtigte Dauer des Leerabschnitts gedrückt halten und dann loslassen. Hierauf wird auf Aufnahmebereitschaft geschaltet.
- 2. Zur Aufnahme fortsetzung die Wiedergabetaste betätigen.



• To create a non-recorded section of about 4 – 5 seconds before starting recording.

1. Press the REC MUTE (●) and PAUSE (■) buttons simultaneously and release them.
2. The REC indicator blinks and the tape turns while in the recording mode, thus creating a non-recorded section.
3. After about 4 – 5 seconds, the tape automatically stops and the recording-standby mode is engaged.

• To make a non-recorded section of less than 4 – 5 seconds.

- When the non-recorded section is to be created while recording.

Soon after pressing the REC MUTE (●) button, and before the recording-standby mode is engaged, press the Play button. Recording will begin. Pressing the PAUSE (■) button instead of the Play button sets the deck to recording-standby mode immediately.

Notes:

- Setting the record-muting time is easy because the REC indicator blinks after each minute during record muting.
- Do not press the operation buttons of tape deck A during record muting.
- As the remote control unit functions differently, refer to page 23.

• Herstellung eines unbespielten Abschnitts vor Aufnahmestart

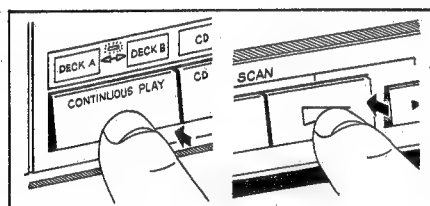
1. Stummaufnahmetaste (●) und Pausetaste (■) gleichzeitig drücken.
2. Die REC-Anzeige blinkt, es erfolgt die Herstellung eines unbespielten Abschnitts.
3. Nach ca. 4 bis 5 Sekunden stoppt das Band automatisch, und das Gerät schaltet auf Aufnahmebereitschaft.

• Herstellung eines unbespielten Abschnitts unter 4 – 5 Sekunden Dauer.

- Leerabschnitteinfügung bei Aufnahme.
- Nach Betätigen der Stummaufnahmetaste (●) vor automatischer Umschaltung auf Aufnahme-Betriebsbereitschaft die Wiedergabetaste betätigen. Die Aufnahme startet. Wird anstelle der Wiedergabetaste die Pausetaste (■) betätigt, erfolgt Umschaltung auf Aufnahme-Betriebsbereitschaft.

Hinweise:

- Die Regelung der Stummaufnahmedauer ist einfach, da die REC-Anzeige in 1-Minuten-Intervallen während der Stummaufnahme blinkt.
- Während der Stummaufnahme keine Kassettenfunktionstaste von Deck A betätigen.
- Da sich die Fernbedienung hiervon in der Funktion unterscheidet, die Angaben von Seite 23 beachten.



CONTINUOUS PLAY FUNCTION

After inserting cassettes in tape deck A and B, press the CONTINUOUS PLAY button. Press the Play button of tape deck A or B to start continuous play. For tape deck B, the playback mode can be set using the REVERSE MODE knob.

• When the REVERSE MODE knob is set to "→":

If tape deck A plays first, it plays the forward side of its cassette, then tape deck B starts play of the forward side of its cassette. Meanwhile, tape deck A rewinds its tape. After the forward side of the tape in deck B is played, tape deck A starts play of its cassette's forward side. After this is finished, the reverse side of the tape in deck B plays. In this way, playback continues without end.

• When the REVERSE MODE knob is set to "↔":

If tape deck A plays first, it plays the forward side of its cassette, and then tape deck B plays both sides of its cassette. After play is finished, tape deck B enters the standby mode with the head reversed for playing the forward side. Following this, tape deck A again plays in the forward direction.

To stop continuous play, press the Stop (■) button of the tape deck which is playing back.

Notes:

- The NR mode should be the same setting for tape deck A and B.
- When replacing the cassette, the CONTINUOUS PLAY indicator goes out. Therefore, after replacing it, press the CONTINUOUS PLAY button again so that its indicator lights.

KONTINUIERLICHE WIEDERGABE

Nach Einlegen einer Kassette in Deck A und B die CONTINUOUS PLAY-Taste betätigen. Zum Start der kontinuierlichen Wiedergabe die Wiedergabetaste von Deck A oder B betätigen. Für Deck B kann die Wiedergabebetriebsart über den REVERSE MODE-Schalter geregelt werden.

• Bei Position "→" des REVERSE MODE-Schalters:

Wird Deck A zuerst auf Wiedergabe geschaltet, wird dessen Vorwärts-Kassettenseite abgespielt und hierauf die Kassette in Deck B bei Vorwärtsrichtung. Das Band in der Kassette von Deck A wird zurückgespult. Nach der Vorwärtsseite der Kassette in Deck B wird erneut die Kassette in Deck A wiedergegeben. Hierauf wird die Wiedergabe mit der Umkehrseite der Deck B-Kassette fortgesetzt. In dieser Abfolge wird die Wiedergabe endlos wiederholt.

• Bei Position "↔" des REVERSE MODE-Schalters:

Startet die Wiedergabe bei Deck A, wird die Vorwärtsseite abgespielt, hierauf beide Seiten der in Deck B eingelegten Kassette. Hierauf schaltet Deck B auf Betriebsbereitschaft, der Tonkopf ist auf Wiedergabe der Vorwärtsseite eingestellt. Hierauf wird erneut die Deck A-Kassette abgespielt.

Zur Abschaltung der kontinuierlichen Wiedergabe die Stoptaste (■) des gerade auf Wiedergabe geschalteten Geräts betätigen.

Hinweise:

- Für Deck A und B die gleiche Rauschunterdrückung verwenden.
- Bei Kassettentausch erlischt die CONTINUOUS PLAY-Anzeige. Daher nach Kassettentausch erneut die CONTINUOUS PLAY-Taste betätigen, so daß die Anzeige leuchtet.

OPERATION OF THE S.E.A. GRAPHIC EQUALIZER

Compensation for room acoustics

The frequency response of a listening room varies depending on the room's shape or furnishings, and the position of the listener in the room. Each listening position in the room provides the listener with a different set of frequency responses, as a result of different degrees of reverberation, reflection, echo, and absorption affecting each frequency.

The S.E.A. system can function to make the sound response of a room flat by emphasizing those frequencies having a high degree of absorption and de-emphasizing those frequencies having a high degree of reflection.

The frequency ranges affected by 'absorption' and 'reflection' are narrow; therefore, it is only necessary to compensate the corresponding frequency band.

Since conventional tone control systems simply adjust the highs and lows centered around the 1 kHz frequency, they are both imprecise and incomplete.

The DR-E7BK/DR-E7LBK monitors and equalizes seven separate audio frequency bands, thus allowing you to make the necessary adjustments in the precisely appropriate frequency bands in order to compensate for the acoustic response of a room and any listening position in it.

Custom sound processing

When a studio recording is made, the sound signals are processed to produce sound that is unique to a particular group or orchestra. With the DR-E7BK/DR-E7LBK, you can do this at home — producing sound tailored exactly to your tastes by emphasizing or de-emphasizing various parts of the music.

Operation

S.E.A. pattern memory

For your own sound compensation and processing, you can use the 10 PROGRAMED and MANUAL preset S.E.A. patterns.

PROGRAMED

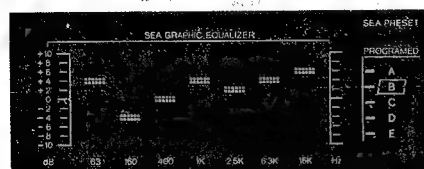
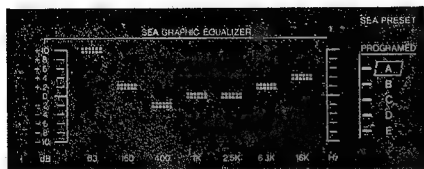
These five S.E.A. patterns were preset at the factory to offer suggested settings for various types of audio programs. Each preset pattern is shown below. After recalling these patterns, you can further change each frequency band to suit yourself. However, since they are representative patterns, the original, stored pattern will be unchanged.

HEAVY (A)

Used for music with a heavy beat, such as rock music. Low frequencies are emphasized to produce a deeper, more powerful sound. Higher frequencies are also emphasized to enhance and bring clarity to the highs, including the percussive notes.

CLEAR (B)

For crisp, clear sound with transparent highs. The low and middle frequencies that tend to be unclear are de-emphasized, and the middle and high frequencies that strengthen the vocal component of the music are emphasized.



BEDIENUNG DES S.E.A.-MEHRBEREICHS- KLANGREGLERS

Kompensation der Raumakustik

Der Frequenzgang von Hörräumen ist abhängig von der Form und Möblierung des Raumes und der Position des Hörers im Raum. Jede Hörposition im Raum hat unterschiedliche Frequenzgänge aufgrund von Unterschieden bei Nachhall, Reflektion, Echo und Absorption der einzelnen Frequenzen.

Das S.E.A.-System kann eingesetzt werden, um in einem Raum einen linearen Frequenzgang zu erreichen, indem die Frequenzen, die einer starken Absorption unterliegen, verstärkt, und die Frequenzen, die stark reflektiert werden, abgeschwächt werden.

Die Frequenzbereiche, die durch "Absorption" und "Reflektion" beeinflusst werden, sind eng, daher braucht nur in den entsprechenden Frequenzbereichen kompensiert zu werden.

Da herkömmliche Klangregelsysteme einfach die Höhen und die Tiefen um 1 kHz regeln, sind sie gleichzeitig ungenau und unvollkommen.

Der DR-E7BK/DR-E7LBK ermöglicht die Einstellung in sieben Frequenzbereichen, so daß genau die richtigen Frequenzbereiche zur Kompensation der Raumakustik und der Hörposition geregelt werden können.

Individuelle Klangregelung

Bei Studioaufnahmen werden die Klangsignale so verarbeitet, daß der Klang erzielt wird, der für eine bestimmte Gruppe oder ein bestimmtes Orchester eigentümlich ist. Mit dem DR-E7BK/DR-E7LBK können Sie das jetzt auch zu Hause — durch exakte Regelung den Klang genau auf Ihren persönlichen Geschmack zuschneiden.

Bedienung

SEA-Musterspeicher

Für die Klangregelung und Kompensation stehen 10 PROGRAMED- und MANUAL-SEA-Klangmuster zur Verfügung.

PROGRAMED

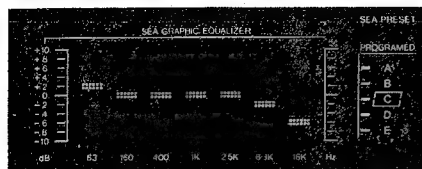
Diese fünf SEA-Muster sind ab Werk im Gerät gespeichert, die für verschiedene Musikarten eingesetzt werden können. Die Muster sind unten dargestellt. Diese Muster können nach dem Abrufen aus dem Speicher nach Wunsch geändert werden. Dabei bleiben die originalen gespeicherten Muster jedoch unverändert.

HEAVY (A)

Für Musik mit starkem Rhythmus wie beispielsweise Rockmusik. Niedrige Frequenzen werden hervorgehoben, um einen tieferen, kraftvolleren Klang zu erhalten. Auch die höheren Frequenzen werden hervorgehoben, um die Höhen einschließlich der Perkussionklänge klarer und eindringlicher zu machen.

CLEAR (B)

Für durchsichtigen, klaren Klang mit transparenten Höhen. Die niedrigen und mittleren Frequenzen, die zur Unklarheit tendieren, sind abgeschwächt, und die mittleren und hohen Frequenzen, die die Vokalkomponenten der Musik verstärken, sind hervorgehoben.



MANUAL



SOFT (C)

For background music. The very low frequencies, which need boosting at low volume levels, are emphasized, and the stimulating effect of higher frequencies is diminished by de-emphasizing high frequencies.

MOVIE (D)

For TV, VCR, and videodisc sound. The low and high frequencies, which are usually of insufficient strength in the sound of these sources, are emphasized to produce a balanced, deeper sound. Also, the excessive brightness that is characteristic of these sources' sound is cut back by de-emphasizing the middle frequency band.

VOCAL (E)

For music that is chiefly vocal, or speech. The middle frequencies, which carry the human voice, are emphasized, while surrounding frequencies are reduced. To accent the higher vocal notes, the highest frequencies are also boosted.

MANUAL

These five S.E.A. pattern memories are provided to allow you to create, store, and recall up to five S.E.A. patterns.

To store the S.E.A. pattern in memory, proceed as follows:

1. Set the S.E.A. pattern using the SEA LEVEL UP/DOWN buttons. This will cause the MANUAL indicator to light, if it has not been lit already.
2. Press the MEMORY button. The MEMORY indicator will light for five seconds.
3. During this period, press the appropriate SEA PRESET button to store the pattern in memory. The SEA PRESET indicator corresponding to the button just pressed will light, the MANUAL indicator will re-light, and the MEMORY indicator will go off.

S.E.A. recording

The S.E.A. graphic equalizer tailors the sound to your own particular taste or compensates for room acoustics or system characteristics, as described on page 53. The DR-E7BK/DR-E7LBK is equipped with an SEA button which makes it possible to record with the added effect of the S.E.A.

Operation

1. Press the SEA button.
2. Set the S.E.A. pattern as required.
3. Proceed in the same way as in normal recording.

Note:

- This memory is held for about one week in normal conditions, but may be erased after exceeding this period.

SOFT (C)

Für Hintergrundmusik. Die sehr tiefen Frequenzen, die bei niedriger Lautstärke Verstärkung benötigen, sind hervorgehoben, und der stimulierende Effekt der hohen Frequenzen ist durch Senken der hohen Frequenzen abgeschwächt.

MOVIE (D)

Für Klang von Fernseher, Videorekorder und Bildplattenspieler. Die tiefen und hohen Frequenzen, die bei diesen Trägermedien gewöhnlich eine unzureichende Stärke aufweisen, werden verstärkt, so daß ein ausgeglichener, tieferer Klang erhalten wird. Weiterhin wird die sehr starke Helligkeit, die für diese Klangquellen charakteristisch ist, durch Senken des mittleren Frequenzbereiches zurückgenommen.

VOCAL (E)

Für Musik, die hauptsächlich aus Gesangs- oder Sprechstimmen besteht. Die mittleren Frequenzen, die die menschliche Stimme tragen, sind hervorgehoben, während die umgebenden Frequenzen reduziert sind. Zum Akzentuieren der höheren Vokalnoten sind auch die höchsten Frequenzen verstärkt.

MANUAL

Diese fünf SEA-Musterspeicher stehen zum Speichern von selbst zusammengestellten SEA-Mustern zur Verfügung, die nach der Speicherung nach Wunsch abgerufen werden können.

Die Speicherung dieser SEA-Muster erfolgt auf die folgende Weise:

1. Das SEA-Muster mit den SEA LEVEL UP/DOWN-Tasten einstellen. Durch Betätigung dieser Tasten leuchtet die MANUAL-Anzeige, falls sie nicht bereits leuchtet.
2. Die MEMORY-Taste drücken. Dann leuchtet die MEMORY-Anzeige für fünf Sekunden.
3. Während dieser Zeitdauer die SEA PRESET-Taste drücken, in die das eingestellte Muster gespeichert werden soll. Die SEA PRESET-Anzeige der gedrückten Taste leuchtet, die MANUAL-Anzeige leuchtet wieder und die MEMORY-Anzeige erlischt.

SEA-Aufnahme

Mit dem SEA-Mehrbereichsklangregler kann der Klang auf den persönlichen Geschmack zugeschnitten werden, außerdem ist Kompensation der akustischen Verhältnisse des Hörraums und der Musikanlage möglich, siehe die Beschreibung auf Seite 53. Der DR-E7BK/DR-E7LBK ist mit einer SEA-Taste ausgestattet, mit der Aufnahme des Klangs mit SEA-Klangregelung möglich ist.

Bedienung

1. Die SEA-Taste drücken.
2. Das gewünschte SEA-Muster einstellen.
3. Die Aufnahme wie bei normaler Aufnahme durchführen.

Hinweis:

- Unter normalen Betriebsbedingungen wird diese Speicherung für ca. eine Woche beibehalten, über diesen Zeitraum hinaus erfolgt Löschung.

SPECIFICATIONS

AMPLIFIER SECTION

Output power : 60 watts per channel,
min. RMS, both channels
driven, into 8 ohms at
1 kHz with no more than
0.9% total harmonic
distortion.

Input sensitivity/impedance
PHONO : 3 mV/50 kohms
CD, VIDEO/AUX : 300 mV/50 kohms
S.E.A. graphic equalizer
Center frequencies: 63 Hz, 250 Hz, 1 kHz,
4 kHz, 16 kHz
Control range : +10 dB \pm 1 dB,
-10 dB \pm 1 dB

FM TUNER SECTION

Tuning range : 87.5 MHz — 108.0 MHz
Usable sensitivity : 0.95 μ V/75 ohms,
1.5 μ V/75 ohms (DIN)
Signal to noise ratio : Mono 80 dB (A-net)
Stereo 73 dB (A-net)
Mono 72 dB (DIN)
Stereo 64 dB (DIN)
Stereo separation : 40 dB at 1 kHz,
35 dB at 1 kHz (DIN)

AM TUNER SECTION

MW

Tuning range : 522 kHz — 1629 kHz
Channel space : 9 kHz
Channel space : 530 kHz — 1630 kHz
10 kHz : 530 kHz — 1710 kHz
(for USA & Canada only)
Sensitivity : 300 μ V/m (at 1000 kHz
or 999 kHz)

LW (DR-E7LBK only)

Tuning range : 144 kHz — 353 kHz
Sensitivity : 600 μ V/m (at 245 kHz)

CASSETTE SECTION

Head Deck A : Metaperm (play)
Deck B : Metaperm (play/rec)
Ferrite (erase)
Frequency response : Normal tape: 30 Hz —
17 kHz (-20 dB rec/play)
Metal tape: 30 Hz —
18 kHz (-20 dB rec/play)
Wow and flutter : 0.07 % (WRMS), 0.13 %
(CCIR WTD)
Signal to noise ratio : 57 dB (metal tape)

GENERAL

Dimensions : 340(W) x 265(H) x
308(D) mm
(13-7/16" x 10-7/16" x
12-3/16")
Weight : 8.5 kg (18.8 lbs)

Design and specifications subject to change
without notice.

TECHNISCHE DATEN

VERSTÄRKERTEIL

Ausgangsleistung : 60 Watt pro Kanal, min.
eff., beide Kanäle an
8 Ohm bei 1 kHz, bei
Klirrfaktor nicht über
0,9%.

Eingangsempfindlichkeit/Impedanz
PHONO : 3 mV/50 kOhm
CD, VIDEO/AUX : 300 mV/50 kOhm
S.E.A. Graphic Equalizer
Mittenfrequenzen : 63 Hz, 250 Hz, 1 kHz
4 kHz, 16 kHz
Regelbereich : +10 dB \pm 1 dB,
-10 dB \pm dB

UKW-TUNERTEIL

Abstimmbereich : 87,5 MHz — 108,0 MHz
Nutzbare Empfind-
lichkeit : 0,95 μ V/75 Ohm,
1,5 μ V/75 Ohm (DIN)
Störspannungs-
abstand : Mono 80 dB (A-Netzwerk)
Stereo 73 dB (A-Netzwerk)
Mono 72 dB (DIN)
Stereo 64 dB (DIN)
Stereokanaltren-
nung : 40 dB bei 1 kHz
35 dB bei 1 kHz (DIN)

AM-TUNERTEIL

MW

Abstimmbereich : 522 kHz — 1629 kHz
Kanalabstand : 9 kHz
Kanalabstand : 530 kHz — 1630 kHz
10 kHz : 530 kHz — 1710 kHz
(Für U.S.A. und Kanada)
Empfindlichkeit : 300 μ V/m (bei 1000 kHz
oder 999 kHz)

LW (nur DR-E7LBK)

Abstimmbereich : 144 kHz — 353 kHz
Empfindlichkeit : 600 μ V/m (bei 245 kHz)

KASSETTENTEIL

Kopf Deck A : Metaperm (Wiedergabe)
Deck B : Metaperm (Wiedergabe/
Aufnahme)
Ferrit (Löschen)
Frequenzgang : Normalband: 30 Hz —
17 kHz (-20 dB Aufn./
Wiederg.)
Metallband: 30 Hz —
18 kHz (-20 dB Aufn./
Wiederg.)
Gleichlaufschwän-
kungen : 0,07 % (WRMS),
0,13 % (CCIR WTD)
Störspannungsab-
stand : 57 dB (Metallband)

ALLGEMEIN

Abmessungen : 340(B) x 265(H) x
308(T) mm
Gewicht : 8,5 kg

Technische Änderungen vorbehalten.

POWER SPECIFICATIONS

Areas	Line Voltage & Frequency	Power Consumption
U.S.A.	AC 120 V~, 60 Hz	185 watts, 225 VA
Canada		
U.K.	AC 240 V~, 50 Hz	160 watts
Australia		
Continental Europe	AC 220 V~, 50 Hz	
Other Areas	AC 110/120/220/240 V~ selectable, 50/60 Hz	

SPANNUNGSVERSORGUNG UND LEISTUNGS-AUFNAHME

Gebiete	Netzspannung und Frequenz	Leistungsaufnahme
USA	120 V~ Wechselstrom, 60 Hz	185 Watt, 225 VA
Kanada		
Großbritannien	240 V~ Wechselstrom, 50 Hz	160 Watt
Australien		
Kontinental-Europa	220 V~ Wechselstrom, 50 Hz	
Andere Gebiete	110/120/220/240 V~ Wechselstrom schaltbar, 50/60 Hz	

CARACTERISTIQUES D'ALIMENTATION

Pays	Tension de ligne et fréquence	Consommation
Etats-Unis	CA 120 V~, 60 Hz	185 watts, 225 VA
Canada		
Royaume-Uni	CA 240 V~, 50 Hz	160 watts
Australie		
Europe Continentale	CA 220 V~, 50 Hz	
Autres Pays	CA 110/120/220/240 V~ sélectionnable, 50/60 Hz	

SPANNINGSVEREISTEN

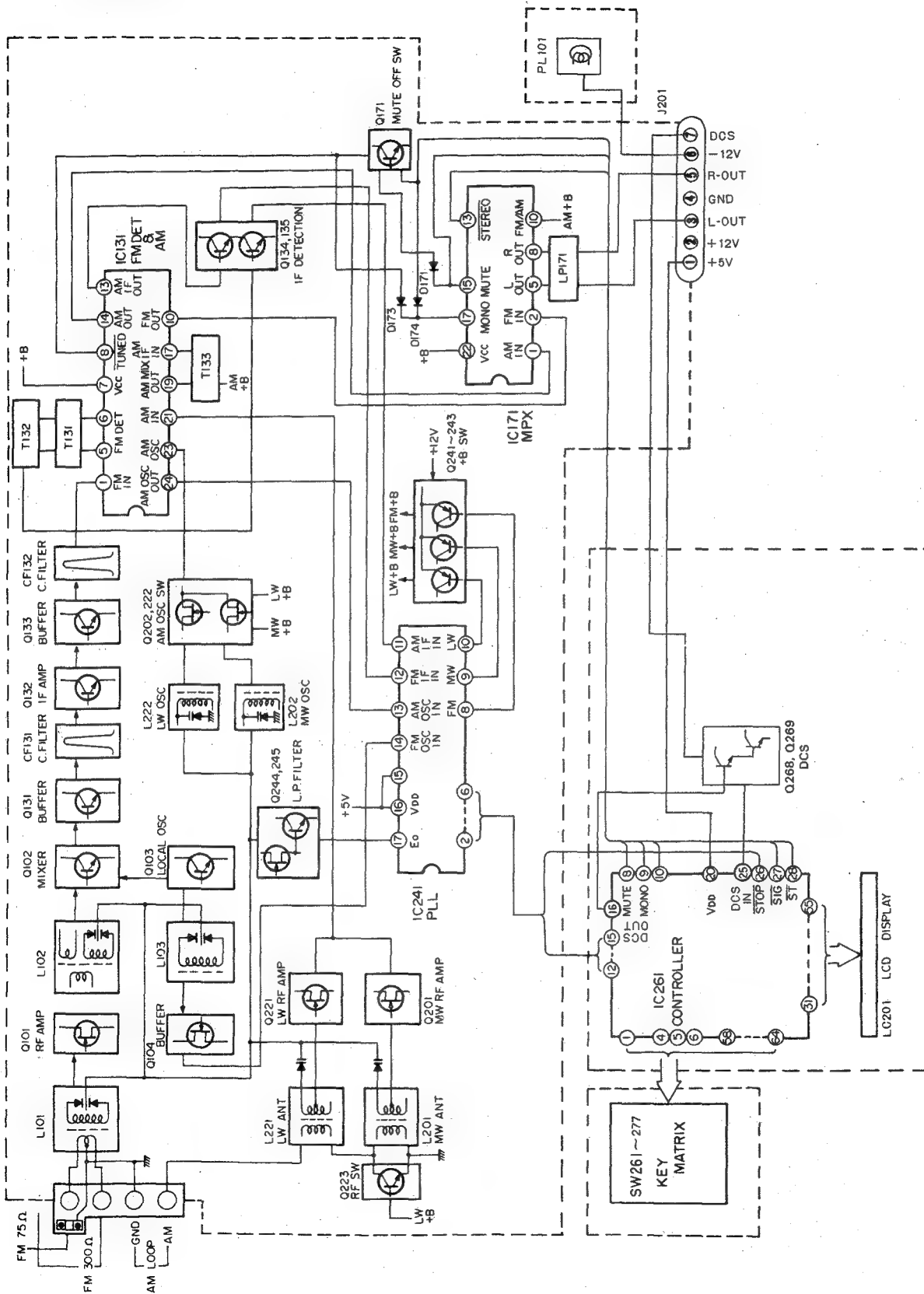
Gebieden	Netzspanning en frekwentie	Stroomverbruik
V.S.	120 V~ wisselstroom, 60 Hz	185 Watt, 225 VA
Canada		
Engeland	240 V~ wisselstroom, 50 Hz	160 Watt
Australië		
Europese vasteland	220 V~ wisselstroom, 50 Hz	
Andere gebieden	110/120/220/240 V~ wisselstroom instelbaar, 50/60 Hz	

ESPECIFICACIONES DE ALIMENTACION

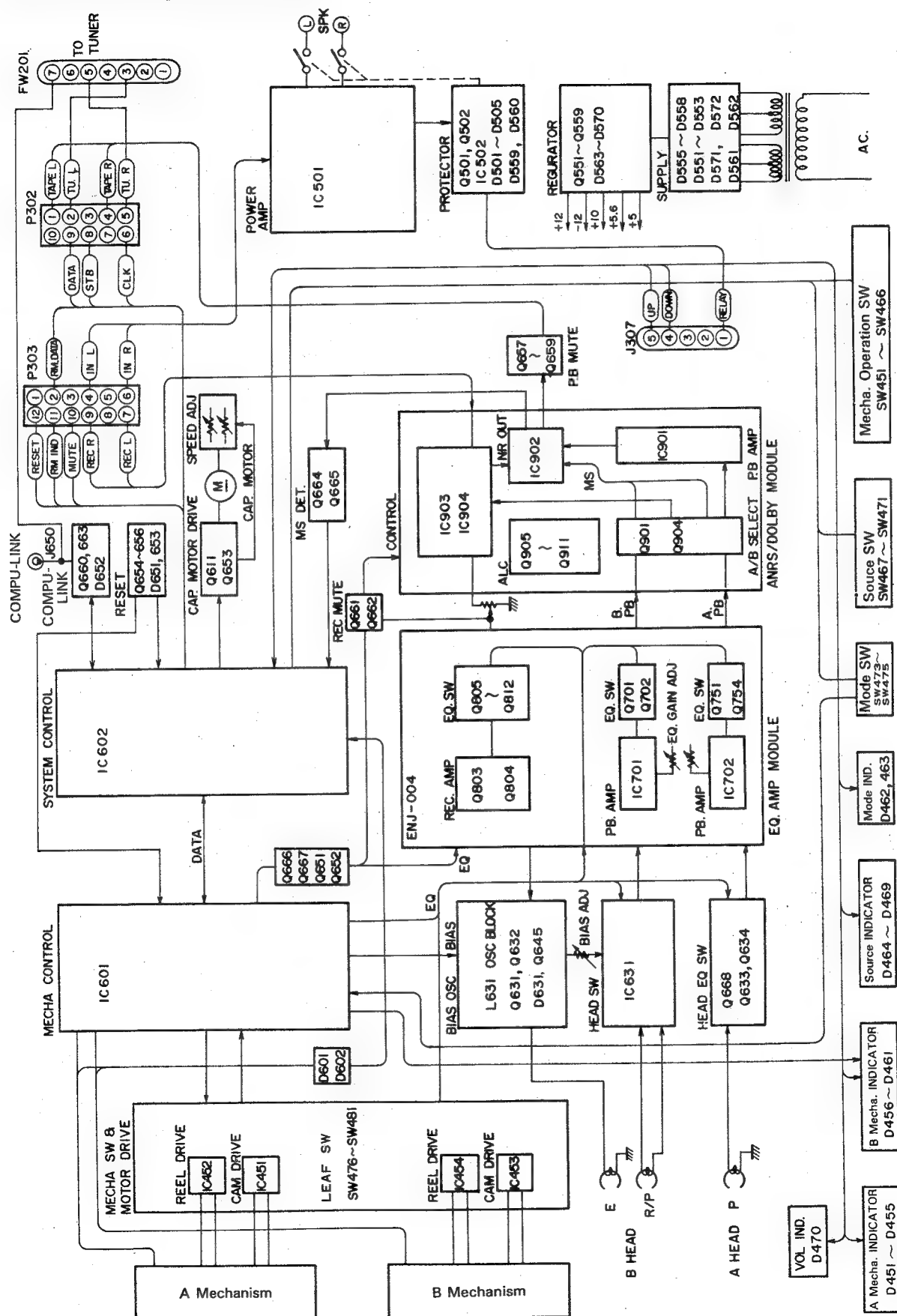
Países	Voltaje y frecuencia	Consumo
EE.UU.	CA 120 V~, 60 Hz	185 vatios, 225 VA
Canadá		
R.U.	CA 240 V~, 50 Hz	160 vatios
Australia		
Europa Continental	CA 220 V~, 50 Hz	
Otras áreas	CA 110/120/220/240 V~ seleccionable, 50/60 Hz	

Block Diagram

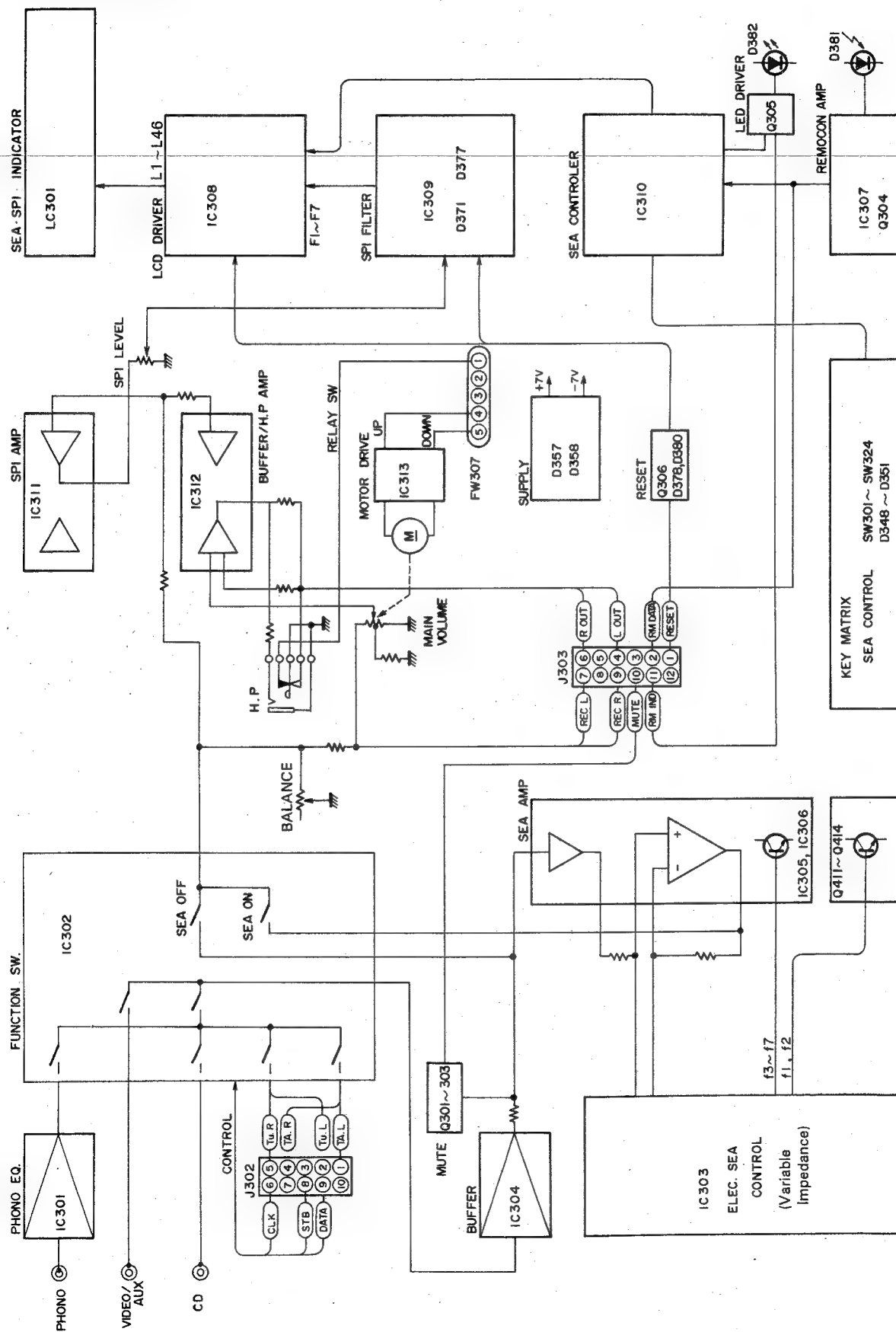
■ Tuner Section



■ Cassette Amplifier Section




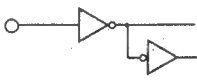


■ Audio Section

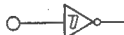




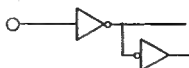


Explanation of each terminal

IC303:LC7522 (Graphic Equalizer)

Name	Number	Terminal type	Explanation
VDD	1	-----	+7V power supply for audio signal
Vref	15		+5V power supply for operating the microcomputer
VSS	18		0V
VEE	14		-7V power supply for audio signal
DI	16		For data input from CPU (Schmitt inverter type)
CLK	17		For clock input from CPU (Schmitt inverter type)
GND	---	-----	Audio signal line GND
IN1	2,27		For audio signal input IN1 connected to the inversion input of the operation amplifier
IN2	3,26		IN2 connected to the non-inversion input of the operation amplifier Provided for both left and right channels.
f1~f7	10~4,19~25		For connection to the band pass filter f1~f7 for left and right channels (total 14)
S	13		Select terminal when using 2 chips 7C3 is connected to Vdd with key code "1" input 7C2 is connected to Vee with key code "0" input

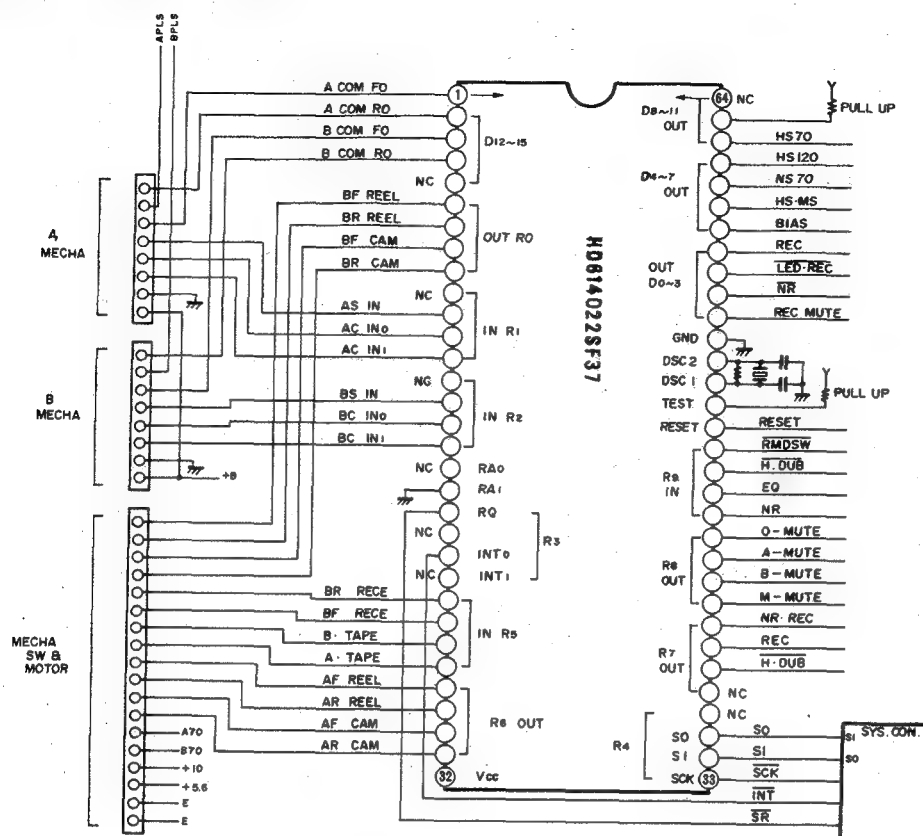
IC308:LC7560 (L.C.Display Driver)

Name	Number	Terminal type	Explanation			
VDD	24,56	-----	+13V power supply for A/D conversion			
Vcc	52		+5V power supply for operating the microcomputer			
VSS	18		0V			
DI	57		For data input from CPU (Schmitt inverter type)			
CLK	55		For clock input from CPU (Schmitt inverter type)			
COM1	53		Common output for LCD			
COM2	54		Common output for LCD			
A1~A11	31~41		Output for LCD segment (f1~f2 band)			
B1~B11	19~30		Output for LCD segment (f3~f4 band)			
C1~C11	7~17		Output for LCD segment (f5~f6 band)			
D1~D11	60~64,1~6		Output for LCD segment (f7 band and total display)			
f1~f7	42~48		Input terminal for audio signal detection output			
T	49		Input terminal for total display			
			Output terminal for input signal detection			
OSC	51		Output buffer (open drain type)			
			External CR connection terminal for oscillator			
S1	58		Chip select terminal	S1	S2	Key code
S2	59		when several chips	1	1	FB
			(4 max.) are used.	0	1	FA
				1	0	F9
				0	0	F8

IC310: μ PD7507HG-507

Pin No.	Symbol	Name	I/O	Terminal Function
1	P10	P10	I	Key input; Composed the key matrix with P30 \rightarrow P33.
2	P11	P11	I	Key input; Composed the key matrix with P30 \rightarrow P33.
3	P12	P12	I	Key input; Composed the key matrix with P30 \rightarrow P33.
4	P13	P13	I	Key input; Composed the key matrix with P30 \rightarrow P33.
5	P30	P30	O	Key output
6	P31	P31	O	Key output
7	P32	P32	O	Key output
8	P33	P33	O	Key output
9	P70	P70	I	Key input; Composed the key matrix with P30 \rightarrow P33.
10	P71	P71	I	Key input; Composed the key matrix with P30 \rightarrow P33.
11	NC	NC	---	Non connection (Pin 1)
12	NC	NC	---	Non connection (GND)
13	P72	P72	I	Key input; Composed the key matrix with P30 \rightarrow P33.
14	P73	P73	I	Key input; Composed the key matrix with P30 \rightarrow P33.
15	RESET	RESET	I	Reset input
16	CL1	X'tal in	I	Connect the ceramic oscillator.
17	Vdd	Vdd	---	+5V
18	CL2	X'tal out	O	Connect the ceramic oscillator.
19	INT1	INT1	---	Not use. (GND)
20	P00/INT1	RM IN	I	Remote control signal input
21	P01/SCK	P01/SCK	---	Not use. (Vdd)
22	P02/SO	INH	I	INH input
23	NC	NC	---	Non connection.
24	P03/SI	TEST	I	SEA volume UP/DOWN test mode
25	P60	CLK	O	Serial CLOCK OUT
26	P61	DATA	O	Serial DATA OUT
27	P62	RM IND	---	Not use. (open)
28	P63	P63	O	"L" output when remote control signal received.
29	P50	P50	---	Not use. (GND)
30	P51	P51	---	Not use. (GND)
31	P52	P52	---	Not use. (GND)
32	P53	P53	---	Not use. (GND)
33	P40	P40	---	Not use. (GND)
34	P41	P41	---	Not use. (GND)
35	P42	P42	---	Not use. (GND)
36	P43	P43	---	Not use. (GND)
37	Vss	Vss	---	GND
38	EVENT	EVENT	---	Not use. (GND)
39	ϕ OUT	ϕ OUT	---	Not use. (open)
40	P20	P20	---	Not use. (open)
41	P21	P21	---	Not use. (open)
42	P22	P22	---	Not use. (open)
43	P23	P23	---	Not use. (open)
44	NC	NC	---	Non connect.

■ Mechanism Control Microcomputer (HD614022SF37)

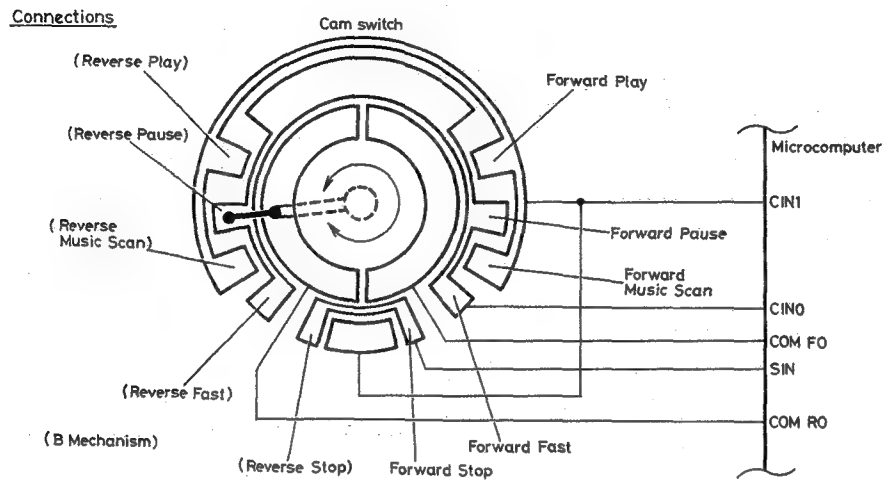


IC601: HD614022SF37

Pin No.	Name	I/O	Port Configuration	Pin No.	Name	I/O	Port Configuration
1	ACOM FO	O	Pull down (MOS)	33	SCK	I	Pull up (MOS)
2	ACOM RO	O	Pull down (MOS)	34	SI	I	Pull up (MOS)
3	BCOM FO	O	Pull down (MOS)	35	SO	O	Pull up (MOS)
4	BCOM RO	O	Pull down (MOS)	36	---	---	---
5	---	---	---	37	HS.DUB	O	C MOS
6	BF REEL	O	Pull down (MOS)	38	HS.DUB	O	C MOS
7	BR REEL	O	Pull down (MOS)	39	REC	O	C MOS
8	BF CAM	O	Pull down (MOS)	40	NR REC	O	Open
9	BR CAM	O	Pull down (MOS)	41	M-MUTE	O	C MOS
10	GND	I	Pull down (MOS)	42	B-MUTE	O	C MOS
11	AS-IN	I	Pull down (MOS)	43	A-MUTE	O	C MOS
12	AC D	I	Pull down (MOS)	44	IO-MUTE	O	C MOS
13	AC 1	I	Pull down (MOS)	45	NR	I	Pull up (MOS)
14	GND	I	Pull down (MOS)	46	EQ	I	Pull up (MOS)
15	BS-IN	I	Pull down (MOS)	47	HS.DUB	I	Pull up (MOS)
16	BC 0	I	Pull down (MOS)	48	RMD SW	I	Pull up (MOS)
17	BC 1	I	Pull down (MOS)	49	---	---	---
18	---	---	---	50	---	---	---
19	GND	---	---	51	---	---	---
20	SRQout	O	Open	52	---	---	---
21	---	---	---	53	---	---	---
22	SRQin	I	Pull up (MOS)	54	REC MUTE	O	C MOS
23	---	---	---	55	NR	O	Open
24	BR REC E	I	Pull up (MOS)	56	LED REC	O	Open
25	BF REC E	I	Pull up (MOS)	57	REC	O	C MOS
26	B-TAPE	I	Pull up (MOS)	58	BIAS	O	Pull down
27	A-TAPE	I	Pull up (MOS)	59	HS.MS	O	Pull down
28	AF REEL	O	C MOS	60	NS.70	O	Pull down
29	AR REEL	O	C MOS	61	HS.120	O	Pull down
30	AF CAM	O	C MOS	62	HS.70	O	Pull down
31	AR CAM	O	C MOS	63	---	---	---
32	---	---	---	64	---	---	---

■ Cam Switch

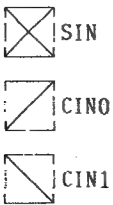
This cam switch provides mechanical information corresponding to the operation mode of the mechanism. As can be seen from the diagram below, this switch has COM FO and COM RO as output lines and SIN, CINO, and CIN1 as receiving lines. This table shows how the position data for the switch is output in one of 6 ways for the 14 position data items.



Position data of cam switch

Cam position	Out port	In port	Position data
During forward quick reverse	COM FO	CINO	REL
Forward play		CIN1	REL
Forward pause		CINO	REL
Forward music scan		CIN1	REL
Forward fast		CINO	REL
Forward stop		SIN	ABS
Forward direction	COM FO	CIN1	REL
Reverse direction	(COM RO)	CIN1	REL
Reverse stop		SIN	ABS
Reverse fast		CINO	REL
Reverse music scan		CIN1	REL
Reverse pause		CINO	REL
Reverse play		CIN1	REL
During reverse quick reverse	(COM RO)	CINO	REL

Note : ABS indicates absolute position data.
REL indicates relative position data.
() indicates the action of B mechanism.





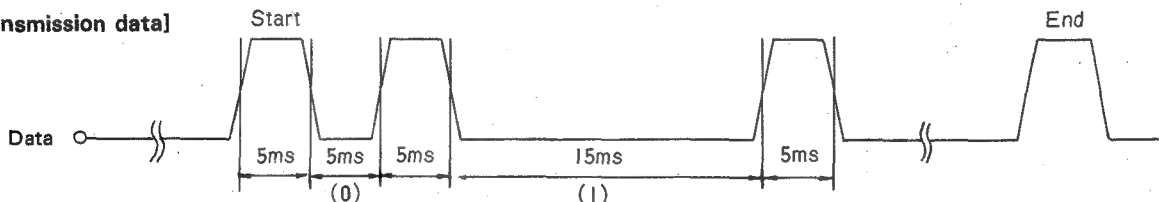
IC602: μ PD75104CW-022

Pin No.	Name	I/O	Function	Active	Pin No.	Name	I/O	Function	Active
1	P13/INT3	I	COMPU-LINK input port	L	33	P33	O	B Deck 3 indicator	L
2	P12/INT2	I	Music scan in L-Music	L	34	P32	O	B Deck 2 indicator	L
3	P11/INT1	I	Remote control input port	H	35	P31	O	B Deck 1 indicator	L
4	P10/INT0	I	Power off input	L	36	P30	O	Control play indicator	L
5	PTH03	I	Not used. (GND)	-	37	P43	O	B Deck reverse indicator	L
6	PTH02	I	Not used. (GND)	-	38	P42	O	B Deck forward indicator	L
7	PTH01	I	Not used. (GND)	-	39	P41	O	A Deck reverse indicator	L
8	PTH00	I	Not used. (GND)	-	40	P40	O	A Deck forward indicator	L
9	TI0	I	A Count pulse input	H	41	P53	O	A Deck 3 indicator	L
10	TI1	I	B Count pulse input	H	42	P52	O	A Deck 2 indicator	L
11	P23	O	Remote control indicator	L	43	P51	O	A Deck 1 indicator	L
12	P22	O	Capstan motor control	H	44	P50	O	SRQ (to mechanism control)	L
13	P21	O	Muting off out H-Mute	L	45	RESET	-	Reset input port	L
14	P20	O	STB (Analog switch)	H	46	X2	-	Clock input 4.19MHz	-
15	P03/SI	I	Timer play	H	47	X1	-	Clock input 4.19MHz	-
16	P02/SO	O	DATA (Analog switch)	H	48	P63	O	SCK (to mechanism control)	L
17	P01/SCK	O	SCK (Analog switch)	L	49	P62	O	DATA out (to mecha. control)	H
18	P00/INT4	I	Timer recording	H	50	P61	I	DATA in (from mecha. control)	H
19	P123	O	Key out 3 (Mask Pull-up)	H	51	P60	I	SRQ1 (from mecha. control)	L
20	P122	O	Key out 2 (Mask Pull-up)	H	52	P73	O	Function "TAPE"	L
21	P121	O	Key out 1 (Mask Pull-up)	H	53	P72	O	Function "PHONO"	L
22	P120	O	Key out 0 (Mask Pull-up)	H	54	P71	O	Function "CD"	L
23	P133	O	Chip select (Mask Pull-up)	H	55	P70	O	Function "TUNER"	L
24	P132	O	Not used. (OPEN)	---	56	P83	O	Function "AUX"	L
25	P131	O	Key out 5 (Mask Pull-up)	H	57	P82	O	SEA on/off indicator	L
26	P130	O	Key out 4 (Mask Pull-up)	H	58	P81	O	CD direct record indicator	L
27	P143	I	Key input 3	H	59	P80	O	Volume indicator off	L
28	P142	I	Key input 2	H	60	P93	O	Volume up	L
29	P141	I	Key input 1	H	61	P92	O	Volume down	L
30	P140	I	Key input 0	H	62	P91	O	Music scan select H --- A	H
31	NC	-	Not connected.	---	63	P90	O	COMPU-LINK output port	L
32	Vdd	-	VDD (+5V)	---	64	Vss	VSS	+5V	---

COMPU-LINK Terminal Data Transmission Method

The COMPU-LINK terminal is a common bus line with other units and interactive data interchange is performed by the transmission method show below.

[Transmission data]



0 or 1 is identified by the pulse interval.

Pulse interval 5 msec. 0

Pulse interval 15 msec. 1

The number of pulses is 9 when transmitting one data item because each consists 8 bits.

[Structure of date]

Binary notion

b ₇	b ₆	b ₅	b ₄	b ₃	b ₂	b ₁	b ₀
1	0	1	0	0	0	0	1

Upper 4 bits

Lower 4 bits

Hexadecimal
notion
A

Hexadecimal
notion
1

A 1 : Switches the amplifier's same to PHONO.

COMPU-LINK code

Details of code

■ Table of COMPU-LINK Code

* : Received or output
--- : Non action

* : Received or output
--- : Non action

COMPU- LINK code	Remote control code	COMPU- LINK output	COMPU- LINK input	Remote control input	Function	Conti- nuity output	COMPU- LINK code	Remote control code	COMPU- LINK output	COMPU- LINK input	Remote control input	Function
C D P l a y e r							P H O N O					
40	B3 44	*	---	*	Open/Close		86	B3 03	*	---	*	Stop
41	B3 4C	*	---	*	Play		87	B3 0C	*	---	*	Play
42	B3 43	*	---	*	Stop		A m p l i f i e r					
43	B3 59	*	---	*	Skip R	**1	A1	A3 3C	---	*	*	Source phono
44	B3 58	*	---	*	Skip L	**1	A2	A3 08	---	*	*	Source tuner FM
45	B3 4D	*	---	*	Pause		//	A3 09	---	*	*	Source tuner MW
46	B3 76	*	---	*	Manual search FF	**2	//	A3 0A	---	*	*	Source tuner LW
47	B3 70	*	---	*	Manual search FB	**2	A3	A3 3D	---	*	*	Source CD player
48	B3 46	*	---	*	Manual search FFF	**2	A4	A3 3F	---	*	*	Source tape
49	B3 47	*	---	*	Manual search FFB	**2	A6	A3 1E	---	---	*	Volume up
4A	B3 51	*	---	*	Index		A7	A3 1F	---	---	*	Volume down
4B	B3 48	*	---	*	Intro scan		AC	A3 3E	---	*	*	Source aux
4D	B3 5C	*	---	*	Repeat A/B		A9	---	---	*	---	Phono -- Deck synchro
4E	B3 5B	*	---	*	Repeat		AB	---	---	*	---	CD -- Deck synchro
4F	B3 54	*	---	*	Display mode		89	---	*	---	---	Non -- Rec
50	B3 60	*	---	*	10Key (0)		8A	---	*	---	---	Rec -- Pause
59	B3 69	*	---	*	10Key (9)		---	A3 30	---	---	*	SEA on/off (Defeat)
5A	B3 6A	*	---	*	Program (Reserve)		---	A3 1C	---	---	*	Muting
5B	B3 6E	*	---	*	10Key (10)		D e c k " B "					
5D	B3 6D	*	---	*	Clear (Cancel)	**1	20	83 0C	---	*	*	Forward play (Nor.& Rec.)
5E	B3 55	*	---	*	Call (Check)	**1	---	83 0E	---	*	*	Reverse play
5F	B3 6F	*	---	*	10Key (+10)		22	83 03	---	*	*	Stop (Normal & Record)
98	B3 78	*	---	*	Disc No.0 (Disc plus)		23	83 06	---	---	*	Fast forward
99	B3 79	*	---	*	No.1		24	83 07	---	---	*	Rewind
9A	B3 7A	*	---	*	No.2		25	83 0D	---	*	*	Pause (Normal & Record)
9B	B3 7B	*	---	*	No.3		26	83 1C	---	*	*	Record mute / pause
9C	B3 7C	*	---	*	No.4		29	83 CC	---	*	*	Forward record / play
9D	B3 7D	*	---	*	No.5		---	83 CE	---	---	*	Reverse record / play
9E	B3 7E	*	---	*	No.6		2B	83 19	---	---	*	Fast forward music scan
T u n e r							2C	83 18	---	---	*	Rewind music scan
C2	A3 08	*	---	*	Source FM		2D	83 CD	---	---	*	Record / pause
C3	A3 09	*	---	*	Source MW		D e c k " A "					
C4	A3 0A	*	---	*	Source LW		---	83 53	---	---	*	Stop
E8	A3 10	*	---	*	Source TV		---	83 56	---	---	*	Fast forward
C6	A3 19	*	---	*	Channel up	**1	---	83 57	---	---	*	Rewind
C7	A3 18	*	---	*	Channel down	**1	---	83 5C	---	---	*	Forward play
D0	A3 20	*	---	*	10Key (16Key) (0)		---	83 5E	---	---	*	Reverse play
↓	↓	↓	↓	↓	↓		---	83 68	---	---	*	Rewind music scan
DF	A3 2F	*	---	*	10Key (16Key) (15)		---	83 69	---	---	*	Fast forward music scan

Note : Continuity output of COMPU-LINK

**1 ... First 1.0 sec., after 0.7 sec.

**2 ... All 0.3 sec.

■ PLL Synthesizer Control Microcomputer (LC5813H-246)

IC261:LC5813H-246

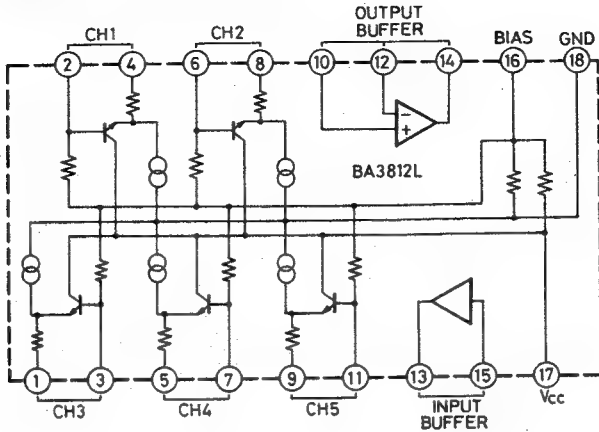
Pin No.	Symbol	Name	I/O	Terminal Function
1	M4	M4	O	Key output
2	TEST 1	TEST 1	---	Not used.
3	TEST 2	TEST 2	---	Not used.
4	S1	S1	I	Port for key input;Compose the key matrix with M1~M4.
5	S2	S2	I	Port for key input;Compose the key matrix with M1~M4.
6	S3	S3	I	Port for key input;Compose the key matrix with M1~M4.
7	S4	INH	I	Back-up detection
8	N1	MUTE	O	When Muting ON, output is "H".
9	N2	MONO	O	When MONO, output is "H".
10	N3	CATV	O	Display input of CATV
11	N4	POWER	O	When POWER ON, output is "L".
12	SI04	STRQ	O	Connect the STRQ of LM7000N.
13	SI03	CLK	O	Connect the CLK of LM7000N.
14	SI02	DATA	O	Connect the DATA of LM7000N.
15	SI01	CE	O	Connect the CE of LM7000N.
16	ALARM	COMPU-LINK	O	Line data output of COMPU-LINK (Positive Logic)
17	T4	T4	---	Not used.
18	Vss2	Vss2	---	GND
19	VLCD	VLCD	---	Voltage reference of LCD (Light at 0V)
20	VDD	VDD	---	+5V
21	X'tal IN	X'tal IN	---	Not used.
22	X'tal OUT	X'tal OUT	---	Not used.
23	CR IN	CR IN	---	Connect the ceramic oscillator.
24	CR OUT	CR OUT	---	Connect the ceramic oscillator.
25	P1	COMPU-LINK	I	Line data input of COMPU-LINK (Negative Logic)
26	P2	STOP IN	I	Input of "AUTO STOP"
27	P3	SIGNAL IN	I	Input of "TUNED" display
28	P4	STEREO IN	I	Input of "STEREO" display
29	COM2	COM2	O	Common 2 of LCD
30	TEST	TEST	---	Not used.
31~54	SEG1~24	SEG1~24	O	1~24 segments of LCD
55	COM1	COM1	O	Common 1 of LCD
56	RES	RES	I	Input of RESET
57	INT	INT	I	Input of Interrupt
58	K1	K1	I	Key input;Compose the key matrix with M1~M4.
59	K2	K2	I	Key input;Compose the key matrix with M1~M4.
60	K3	K3	I	Key input;Compose the key matrix with M1~M4.
61	K4	K4	I	Key input;Compose the key matrix with M1~M4.
62	M1	M1	O	Key output
63	M2	M2	O	Key output
64	M3	M3	O	Key output

The diagram illustrates the pin configuration and internal functional blocks of the LA1267S. The pins are numbered 1 through 24, with some pins having multiple functions or connections. The internal blocks include FM-IF, FM DET, POST AMP, S-Curve, AM IF, DET, AGC, S Meter, SD ADJ, and LED DRIVER. The oscillator section consists of OSC, Buffer, and Reg. blocks. Power supply pins (VCC, GND) and an oscillator section (OSC, Buffer, Reg.) are also shown.

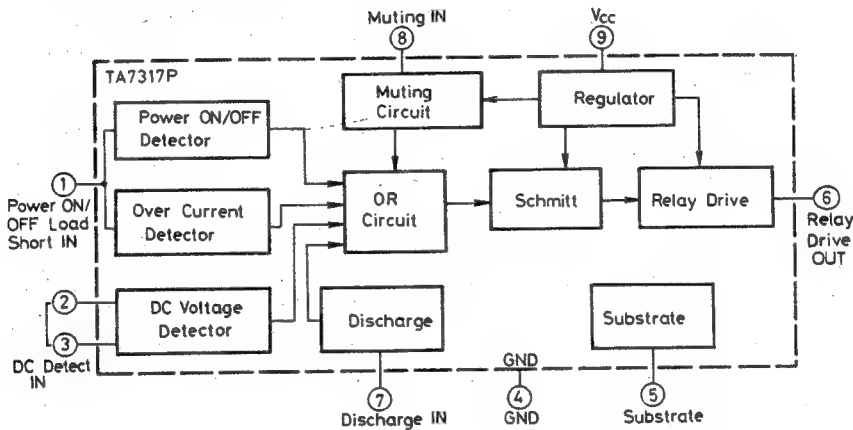
Terminal Name	Function
SYC	Clock(400kHz) for controller
XIN,XOUT	Crystal oscillator(3.6MHz) Included the feedback resistor.
FMI,AMI	Local oscillator signal input
CE,CL,DATA	Data input
B01,B02,B03	Band data output
STRQ	Request of IF counter input
STOUT	Auto-search stop signal output
V dd1, V dd2, V ss	Power supply(V dd2:for back-up)
AMIF,FMIF	IF signal input
PD1,PD2	Charge pump output

[illegible]

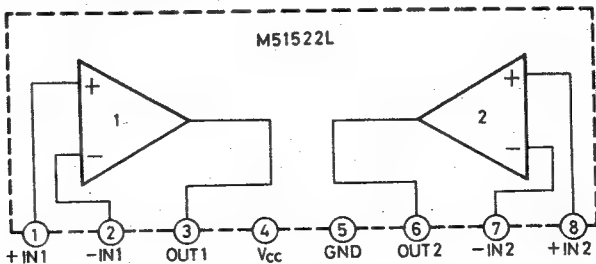
IC305, IC306: BA3812L



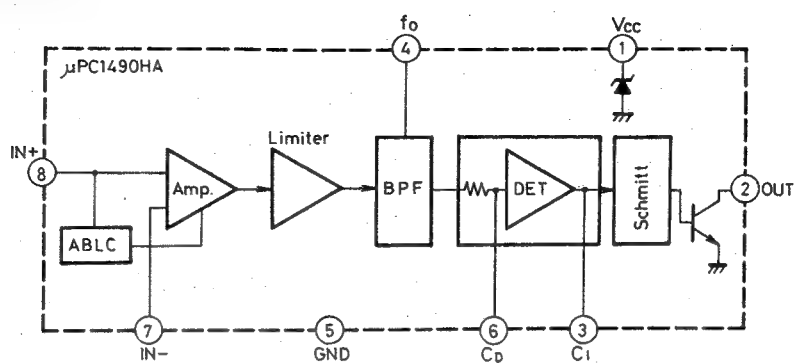
IC502 : TA7317P



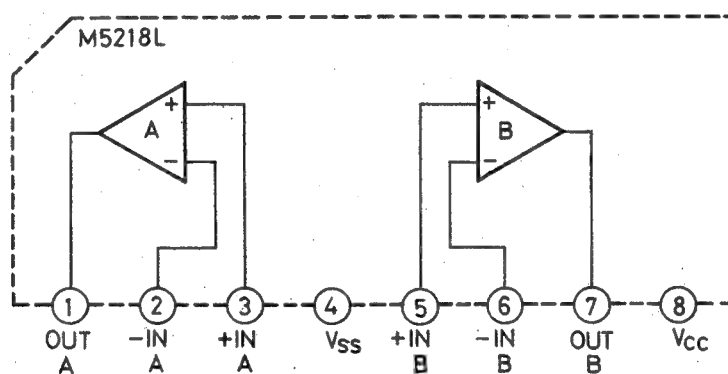
IC701, IC702 : M51522L



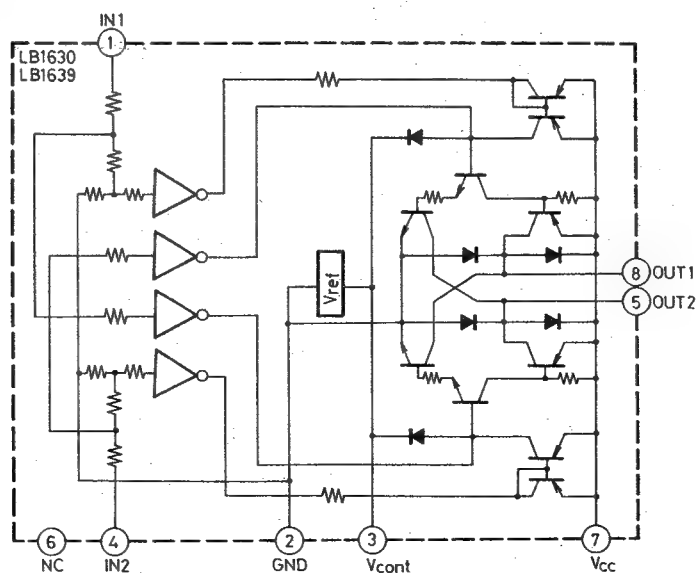
IC304 : μ PC1490HA



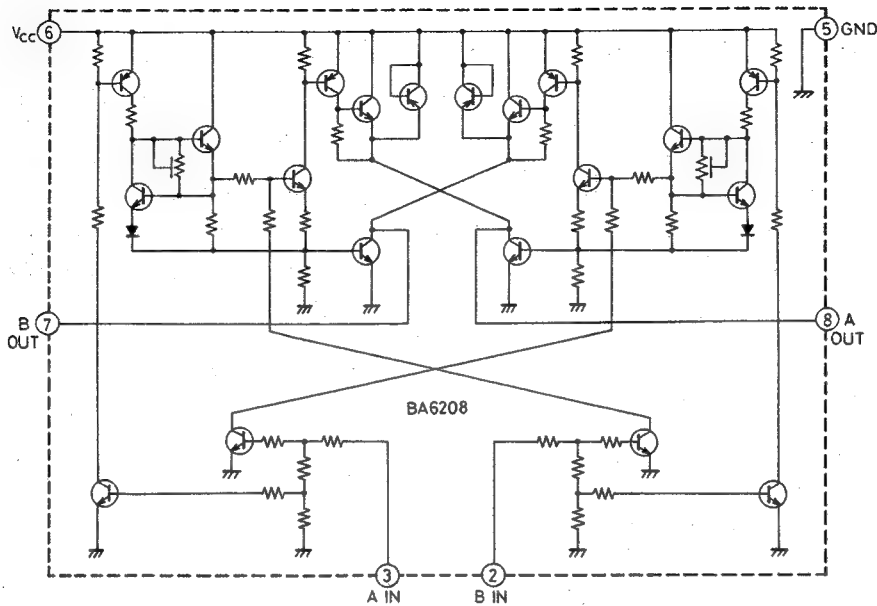
IC301, IC303, IC307: M5218L



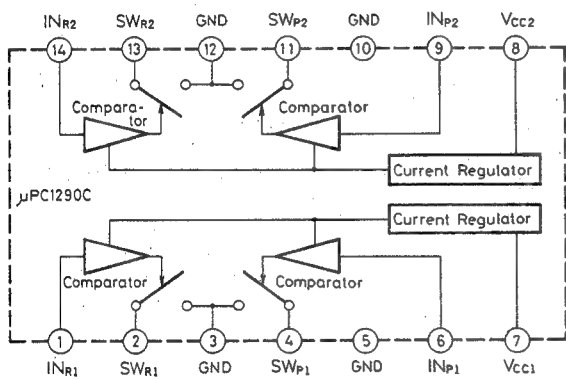
IC301, IC452, IC454 : LB1639



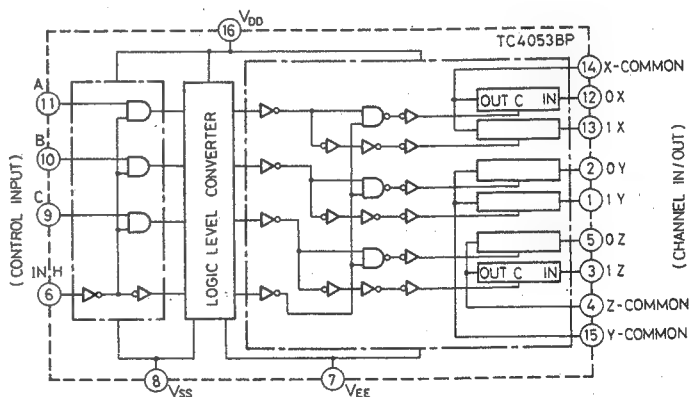
IC451, IC453 : BA6208



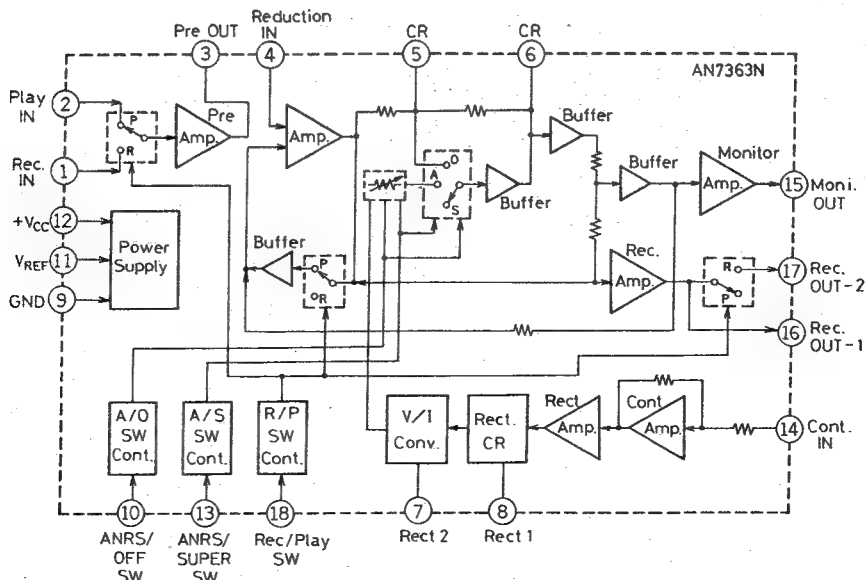
IC631 : μ PC1290C



IC902 : TC4053BP

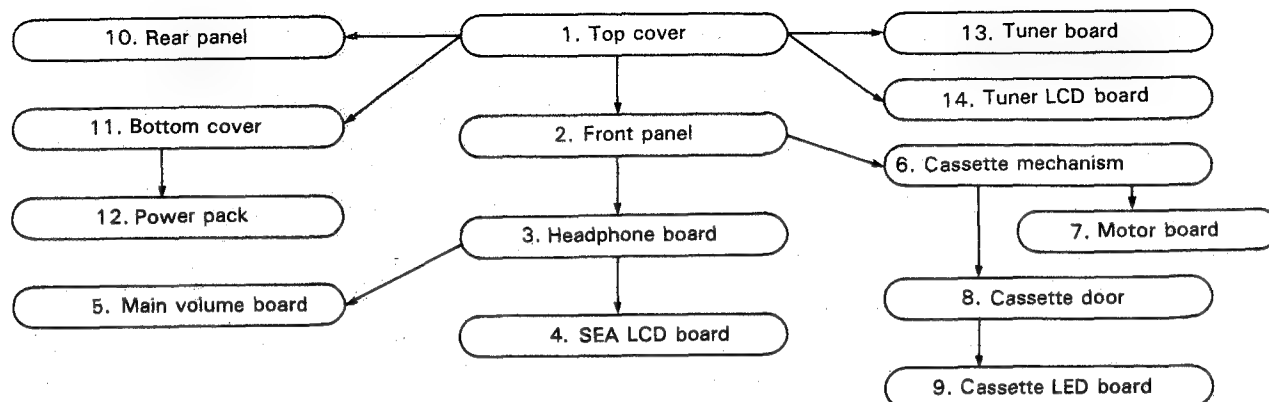


IC903, IC904 : AN7363N



Disassembly Procedures

Disassembly parts following the flow chart below because this unit is assembled by a specified procedure.



1. How to remove the top cover

- (1) Remove three screws retaining each side panels (6 in total).
- (2) Remove two screws on the rear and raise the rear side of the top cover.

2. How to remove the front panel

- (1) Remove screw ① on the right side panel.
- (2) Remove plastic rivet ② retaining the tuner P.C.B.
- (4) Remove two white screws retaining the mechanism from the bottom.
- (5) Take out the wires.

3. How to remove the headphone PCB

- (1) Take out each of the DISPLAY LEVEL and BALANCE knobs.
- (2) Remove three screws retaining the headphone P.C.B.

4. How to remove the SEA LCD PCB

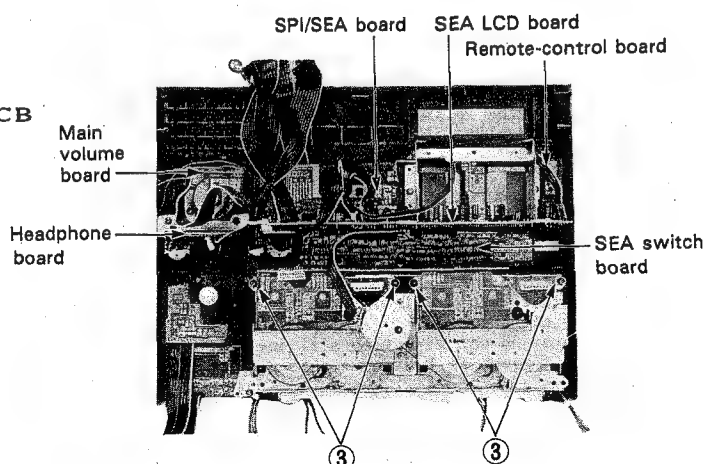
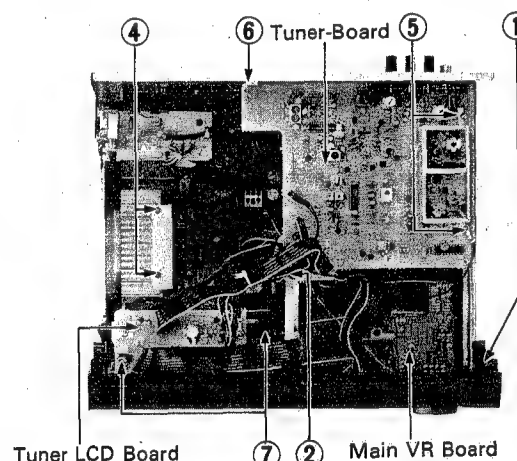
- (1) Remove the remote control LED P.C.B. and the SPI/SEA P.C.B. that are held by the front panel claws.
- (2) Remove two screws retaining the LCD bracket.
- (3) Remove three screws retaining the S.E.A. switch P.C.B. and take it out from the front panel claws.

5. How to remove the main volume PCB

- (1) Take out the main volume knob.
 - (2) Take out the LED holder inside the knob.
 - (3) Remove the nut retaining the main volume.
- Note: Be careful not to cut the thin wires connecting the LED.

6. How to remove the cassette mechanism

- (1) Remove the counter belt.
- (2) Remove four screws ③ retaining the cassette mechanism.
- (3) Open the cassette door.



7. How to remove the motor PCB

- (1) Remove three screws retaining the motor P.C.B.
- (2) Unsolder the motor P.C.B.

8. How to remove the cassette door

- (1) Remove two dampers.
- (2) Remove two springs.
- (3) Remove one bracket at the center.

9. How to remove the cassette LED PCB

- (1) Remove the holder cover (PVC sheet in] shape) by hand.
- (2) Remove the cassette LED P.C.B. from the claws.

10. How to remove the rear panel

- (1) Remove ten screws retaining the rear panel.
- (2) Remove one retaining screw from the bottom.

11. How to remove the bottom cover

- (1) Remove fifteen screws retaining the bottom cover.

12. How to remove the power pack

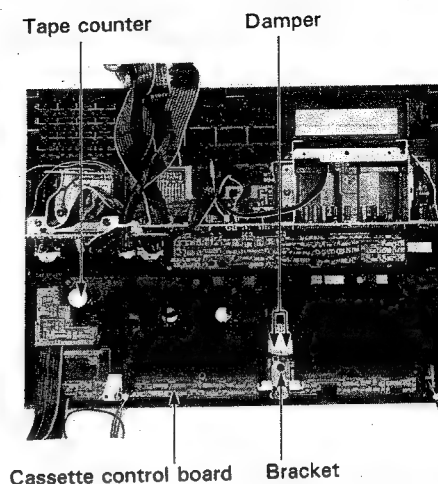
- (1) Remove two screws ④ retaining the bracket of the power pack.
- (2) Unsolder the power pack.

13. How to remove the tuner PCB

- (1) Remove two screws ⑤ retaining the tuner P.C.B.
- (2) Take out plastic rivet ②.
- (3) Remove retaining screw ⑥ from the rear panel.

14. How to remove the tuner LCD

- (1) Remove two screws ⑦ retaining the tuner LCD P.C.B.



Maintenance

■ Cleaning

1. Recording/playback head

When used for a long period, magnetic particles and dust will accumulate on the section coming into contact with the tape, resulting in imperfect erasure and a drop in high frequency reproduction. Wipe it with cloth soaked in alcohol.

2. Pinch roller and capstan

When the tape contact section becomes dirty, the rotation will become uneven because the tape speed is not uniform. Therefore, wipe sections of capstan and pinch roller that come into contact with the tape with a soft cloth soaked in alcohol.

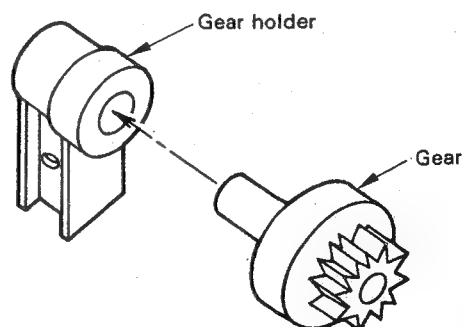
Note: Do not wipe with silicone oil or strong detergent such as Hexane or carbon tetrachloride.

3. External sections (panel, etc.)

When external sections become dirty, wipe with a cloth soaked in detergent or polishing cloth. Do not use a strong detergent, thinner or benzine.

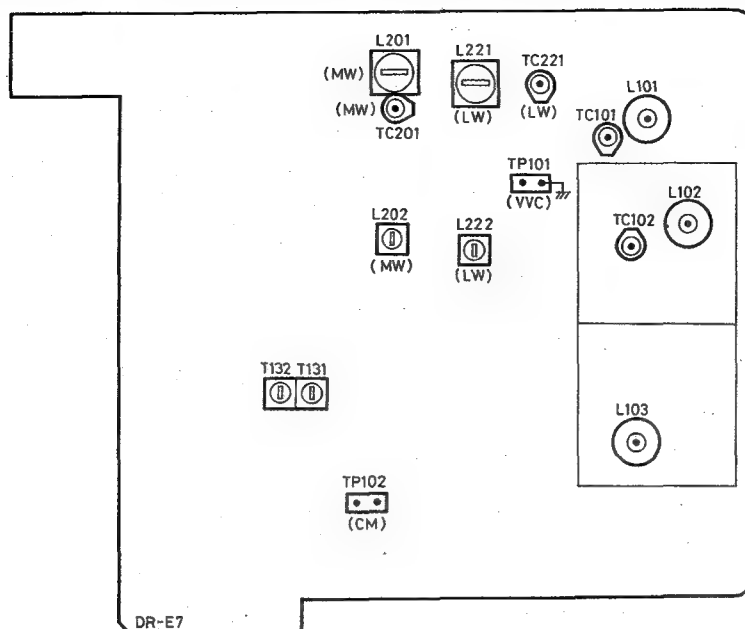
Note: Do not wipe transparent plastic sections with a cloth soaked in alcohol because it could cause cracks to develop.

■ Gear Damping Unit



Insert by turning it after putting a little grease (G-333) on each.

FM/MW/LW Tuner Alignment Procedures



DR-E7

(1) Front-end Section

FM oscillator coil : L103

1. Set the frequency display to "108.0 MHz" and the FM MODE switch to "MONO" position.
2. Confirm that the noise occurs in the condition of no signal input.
3. Adjust L103 so that the output of test point "TP101" becomes $9.0V \pm 0.1V$.
4. Set the frequency display to "87.5 MHz" and confirm that the output of test point "TP101" is $1.6V \pm 0.5V$.

FM antenna coil : L101, L102

5. Adjust L101 and L102 to obtain the maximum sensitivity at 89.9 MHz.

FM antenna trimmer : TC101, TC102

6. Adjust TC101 and TC102 to obtain the maximum sensitivity at 105.9 MHz.
7. Repeat the above adjustments of L101, L102, TC101 and TC102.

Note : After adjustment, confirm that the "Band Cover" is in the following range (for West Germany only).

Lower edge : 87.5 MHz(+0 Hz, -300 kHz)
Higher edge : 108.0 MHz(+500 kHz, -0 Hz)

(2) IF, Detection and MPX

FM detector coil : T131, T132

1. Connect a center-meter or a digital voltmeter to test point "TP102", and tune in a 100.1 MHz signal (1kHz modulation, 75kHz or 40kHz deviation) in the condition of SSG ATT 70dB.
2. Adjust T131 so that the center-meter indicates "0" or the digital voltmeter reads 0 mV.
3. At the same time, adjust T132 so that the distortion of audio output is minimized.

(3) MW Section

Note : () : 9kHz step, [] : 10kHz step

MW oscillator coil : L202

1. Set the frequency display to (522 kHz) [530 kHz] and confirm that the output of test point "TP101" is $(1.1V \pm 0.3V)$ [1.1 V \pm 0.3 V].
2. Set the frequency display to (1629 kHz) [1630 kHz or 1710 kHz] and confirm that the output of test point "TP101" is $(7.5V \pm 0.8V)$ [7.5 V \pm 0.8 V or 8.2 V \pm 0.8 V].
3. If its output is over 9V at [1710 kHz], adjust L202 to obtain [9.0 V].

MW antenna coil : L201

4. Connect a loop antenna to the "AM LOOP" terminal on the rear panel.
5. Adjust L201 to obtain the best receiving sensitivity on (603 kHz) [600 kHz].

MW antenna trimmer : TC201

6. Adjust TC201 to obtain the best receiving sensitivity on (1404 kHz) [1400 kHz].

(4) LW Section

LW oscillator coil : L222

1. Set the frequency display to 144 kHz.
2. Adjust L222 to obtain 1.0 V at test point "TP101".
3. Set the frequency display to 353 kHz and confirm that the output of test point "TP101" is $7.2V \pm 1.2V$.

LW antenna coil : L221

4. Connect a loop antenna to the "AM LOOP" terminal on the rear panel.
5. Adjust L221 to obtain the best receiving sensitivity on 164 kHz.

LW antenna trimmer : TC221

6. Adjust TC221 to obtain the best receiving sensitivity on 353 kHz.

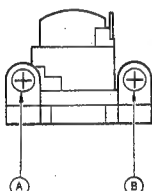
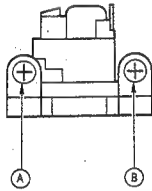
Adjustment of the Cassette Deck Section

(1) Measuring instruments necessary for Adjustment

- | | |
|---|--|
| 1. Low frequency oscillator (Output of 0 dbm should be obtained at the 600 ohm terminal at a frequency of 50Hz ~ 20kHz.) | TMT-6237 (for music scanning)
TMT-6247 (for music scanning) |
| 2. Attenuator (600 ohm impedance) | 5. Recording standard tapes
TS-5 (SF), TS-7 (METAL) or equivalent. (Use the standard tape specified by JVC Audio Division.) |
| 3. Electronic voltmeter | 6. 600-ohm impedance (for attenuator matching) |
| 4. Standard tapes
VTT-703L (for head azimuth adjustment)
VTT-712 (for tape speed, wow & flutter)
VTT-724 (standard level)
VTT-738 (for playback frequency response) | 7. Distortion factor meter (bandpass filter)
8. Torque gauge : CTG-N (cassette type)
9. C-120 tape (for checking the tape running) |

(2) Adjustment and repairing the mechanism

(Adjust and check the mechanism before adjusting the electric circuit)

Item	Adjustment method	Standard value	Remarks
Adjusting azimuth of rec/play head	1. Connect the output from the SPK OUT terminal to the voltmeter. (At about 1 volt.) 2. Play back VTT-703L.		1) When the specified characteristic cannot be obtained because of head wear, cut wire, excessive magnetization, etc., replace the head and adjust the head azimuth. Also, perform the adjustment of the playback level, recording bias current, recording level, etc.
A mechanism 	3. Adjust screw A so that the output of the voltmeter becomes maximum when PLAY (▶) is pressed.	Maximum	2) When there is the difference of more than 3 ~ 4 dB between left and right output levels, replace the head to avoid complaints.
	4. Adjust screw B so that the output of the voltmeter becomes maximum when PLAY (◀) is pressed.	Maximum	
	5. Paint screws A and B with screw locking compound so they do not come loose after adjustment.		
B mechanism 	6. Adjust screw A so that the output of the voltmeter becomes maximum when PLAY (▶) is pressed.	Maximum	
	7. Adjust screw B so that the output of the voltmeter becomes maximum when PLAY (◀) is pressed.	Maximum	
	8. Paint screws A and B with screw locking compound so they do not come loose after adjustment.		
Playback torque	Measure the torque in the playback mode using the torque measurement cassette CTG-N.	35 ~ 75 g-cm	When the standard torque cannot be obtained, clean or replace the take-up disc assembly.
Fast forward torque	Measure the torque in the fast forward mode by the same procedure.	More than 70 g-cm	When the standard torque cannot be obtained, 1) Clean the capstan belt, rim of the fly-wheel, motor pulley, etc. 2) Change the belt, idler, etc.
Rewind torque	Measure the torque in the rewind mode by the same procedure.	More than 70 g-cm	When the standard torque cannot be obtained, clean the motor pulley, capstan, rim of the fly-wheel, rim of the supply reel disc, etc.
Wow & flutter	Play back VTT-712 and attach the wow & flutter meter to the SPK OUT terminals of this unit; its reading should be within 0.15 % (WRMS).		As a complaint may occur if the wow & flutter fluctuates by 0.1 % even though it is allowed in the standard, repairing is required.

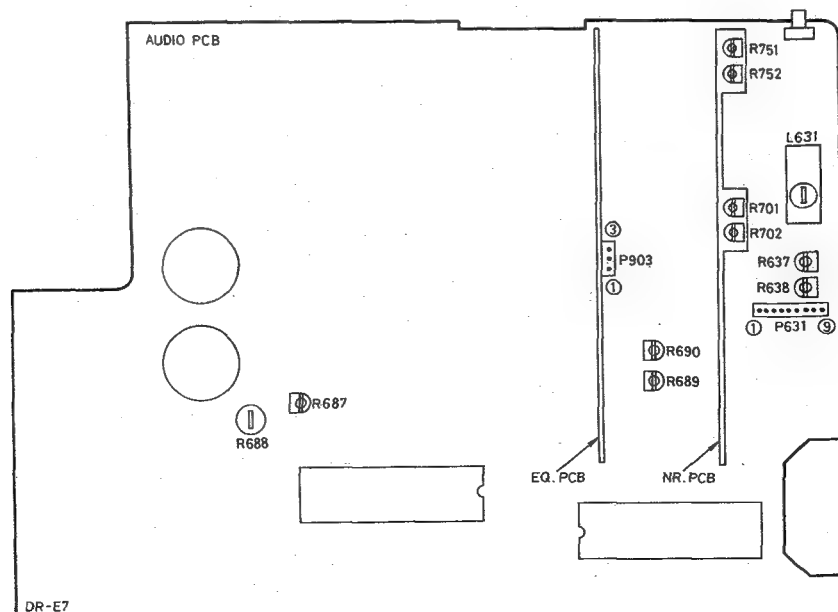
(3) Adjustment of the electric circuit

1. Perform the following adjustment after the head azimuth adjustment.
2. The adjustment procedure should be performed basically in order described below.
3. Perform with the NR switch set to OFF and the BEAT CUT switch set to "1".
4. Be sure to adjust parts marked * when the head is replaced.

Item	Adjustment method	Standard value	Remarks
Motor speed	1. Playback VTT-712 and set the function to TAPE and connect the electronic counter to the SPK OUT terminals.		If an electronic counter is built into the wow & flutter meter, just connect it to the INPUT.
	2. Constant speed adjustment (be sure to perform this first.) 1) Play back using mechanism B and adjust it so that 3,000 Hz is obtained by turning semi-fixed resistor R688 on the cassette amplifier P.C.B.	3,000 Hz	
	3. Double-speed adjustment 1) Play back using mechanism A for double-speed dubbing, and adjust it so that 6,000 Hz is obtained by turning semi-fixed resistor R687 on the cassette amplifier P.C.B.	6,000 Hz	Load a tape that can be used for recording in mechanism B.
*1. Playback level	Play back VTT-724 (1kHz) with the tape selector set to NORM and adjust so that the output ③--② (L) and ③--① (R) of P903 is -3 dbs. A deck : R751(L), R752(R) B deck : R701(L), R702(R)	-3dbs	Adjust the playback level when replacing the head because it may change. In this case, the impedance of the voltmeter should be more than 100 kohm.
*2. Recording amplifier gain	1. Input a -8 dbs (1kHz) signal to the AUX terminals, set the function switch to AUX then set mechanism B to the recording mode. 2. Check that the output ③--② (L) and ③--① (R) of P903 is -3 dbs.	-3dbs \pm 1dB	
*3. Recording bias frequency	Connect a frequency counter between ③ and ⑤ of P631, and play back a metal tape. Adjustment point : L631	105kHz \pm 5kHz	
*4. Recording frequency response	Record 1 kHz by inputting first -20 dB from the AUX terminals with the NR switch set to OFF and then 100 Hz/10 kHz. Adjust R637 and R638 so that the deviation of output of 100 Hz/10 kHz to the output of 1 kHz satisfies the standard value when the tape is played back. (Basically, adjust them so that the output at 1 kHz and 10 kHz is the same.)	By making 1kHz the standard, 0 \pm 3 dB should be obtained at 100 kHz and 0 \pm 2 dB should be obtained at 10 kHz.	1) Basically adjust the recording/playback frequency characteristics of the cassette deck using the bias adjustment. This is because it is more dependent on the bias current than as open reel deck. 2) Adjust with a normal tape; when a metal tape is used, the value should be within the specified range.

Note: After performing the recording level adjustment in item 5, check the recording/playback frequency characteristics with the NR switch set to ON.
In this case, the fine adjustment should be done again if 1 kHz/10 kHz difference is more than 0 \pm 4 dB.

Item	Adjustment method	Standard value	Remarks
*5. Recording level	1. Apply an input of 1 kHz (-8 dbs) to the CD terminals and record it on left and right channels using normal tape. 2. When playing it back, adjust the recording signal current so that the output ③--② (L) and ③--① (R) of P903 is -3 dbs. Adjustment points: R689(L), R690(R)	-3dbs \pm 1dB	Adjust with a normal tape; when using a metal tape, check that the level difference is within 1.5 dB and the level difference of left and right is within 1.0 dB.
*6. Check the recording/playback distortion	1. Record a signal of 1 kHz (-8 dbs) input from the CD terminals. 2. Check that the output of this signal when played back satisfies the standard value using the distortion meter.	Less than 2 % for normal tape or metal tape.	Perform after adjusting the bias current and recording level.
7. Check the recording/playback S/N ratio	1. Record a 1 kHz (-8 dbs) signal input from the CD terminals and no signal by removing the input in the middle of recording. (Use the REC MUTE button.) 2. Play back this recorded signal; the ratio of the 0 dB recording output and no signal recording output measured by the voltmeter should satisfy the standard value.	More than 42 dB for normal tape or metal tape	
8. Check erasing	1. Record a signal of 1 kHz (0 dbs) input from the CD terminals. 2. Rewind the tape and erase part of the recording. 3. Measure the output ratio of the recorded part and erased part.	More than 65 dB	For measurement, connect the B.P.F. (bandpass filter) between the deck and the electronic voltmeter. Check with a metal tape.
9. Check auto stop	Check that the tape does not automatically stop near the end of rewinding. (The clearance between the magnet and Hall IC should be within 0.5 ± 0.3 mm.)		
10. Check music scanning	1. The music scanning should function at the end of winding in FF SCAN and at the beginning of the winding in REW SCAN using TMT-6247. 2. Music scanning should not function when the TMT-6237 is used.		



Servicing the Audio P.C. Board

There are small PC Boards(module PC Boards) installed vertically on the audio amplifier PC Board.

- 1) EQ.(Equalizer) PC Board (ENJ-004)
- 2) NR.(Noise Reduction) PC Board (ENJ-011)

(1) Check each terminal before changing parts on the module PC Boards.

1.EQ.PC Board (ENJ-004)

Details of defect	Check item	Check point
When recording is impossible (in any mode)	Is the power supplied?	P801⑦⑨
	Is recording bias applied?	P801⑤⑥
	Is the recording signal present?	P801⑧⑩
When the recording/ playback frequency characteristics are defective	Are the playback frequency character- istics normal?	to playback module
	Is the recording equalizer switch input normal?	P701①②③④
When playback is impossible	Is the power supplied?	P701⑦⑨
	Is the head wire cut?	P701②③⑤④
	Is there any output?	P701⑤⑥⑧⑩
When the playback frequency character- istics are defective	Is the playback equalizer switch input normal?	P701④①⑦

2.NR.PC Board (ENJ-011)

Details of defect	Check item	Check point
When recording is impossible	Is REC selection normal?	P902③
When playback is impossible	Is the power supplied?	P901⑫, P902①
	Is the playback signal present?	P901⑥⑦⑧⑨
	Is A/B signal selection normal?	P901 ⑩⑪
	Is REC selection normal?	P901④, P902③
	Is there any output?	P901 ①②
When music scanning is impossible	Is the playback signal present?	P901⑥⑦⑧⑨
	Is music scan selection normal?	P901 ⑤
	Is there any output?	P901 ③
When NR is not effective	Is NR control normal?	P902②
When ALC is not effective	Is ALC inhibit control normal?	P902⑨
When monitoring is impossible in the dubbing mode	Is the playback signal present?	P901⑧⑨
	Is REC control normal?	P901④
	Is there any output?	P901①②

2.NR.PC Board (ENJ-011)

Details of defect	Check item	Check point
When recording is impossible	Is the recording signal present?	P902⑥⑦
	Is there any output?	P902④⑤

(2) Locate the probable defect and module from the above check. The following shows the use of semiconductors on the PC Boards.

1.EQ.PC Board (ENJ-004)

Use	L	R	Remarks
Signal amplifier	Q801, Q803	Q802, Q804	2SC458(D)
High speed normal EQ switch	Q809	Q810	2SC1685(Q, R)
High speed metal EQ switch	Q811	Q812	2SC1685(Q, R)
Low speed normal EQ switch	Q805	Q806	2SC1685(Q, R)
Low speed metal EQ switch	Q807	Q808	2SC1685(Q, R)
Signal amplifier B/A mechanism	IC701, IC702	IC701, IC702	M51522L
R mechanism metal EQ switch	Q701	Q702	2SK301(P, Q)
A mechanism metal EQ switch	Q751	Q752	2SK301(P, Q)

Use	L	R	Remarks
A mechanism double-speed EQ switch	Q753	Q754	2SK301(P, Q)

2.NR.PC Board (ENJ-011)

Use	L	R	Remarks
Deck A/B signal selection	Q901, Q903	Q902, Q904	2SD1302(S, T)
Deck A signal amplifier	IC901	IC901	M5218L
Dubbing and music scanning selection	IC902	IC902	TC4053BP
ALC	Q905, Q907, Q909	Q906, Q908, Q910	2SC1740(R, S)
ALC inhibit	Q911	-----	2SC1740(R, S)
REC/PB NR	IC903	IC904	AN7363N

(3) The condition of the input/output and control as a single PC Board is shown below.

1. EQ.PC Board (recording amplifier section: ENJ-004-1)

Pin No.	Pin function	Remarks
1	High speed normal EQ	Electronic switch input 5 V
2	High speed metal EQ	Electronic switch input 5 V
3	Low speed normal EQ	Electronic switch input 5 V
4	Low speed metal EQ	Electronic switch input 5 V
5	R channel signal output	
6	L channel signal output	
7	+B	+12 V
8	L channel signal input	
9	GND	
10	R channel signal input	

Gain

Control	①, ②, ③, ④ Open	5V for only ①	5V for only ②	5V for only ③	5V for only ④
in ④	100 Hz	-8.7dB ± 1.5dB	-8.5dB ± 1.5dB	-5.1dB ± 1.5dB	-9.7dB ± 1.5dB
out ⑤	1 kHz	-9.7dB ± 1.5dB	-9.5dB ± 1.5dB	-6.1dB ± 1.5dB	-9.6dB ± 1.5dB
	10 kHz	-8.6dB ± 1.5dB	-7.5dB ± 1.5dB	-2.6dB ± 1.5dB	-2.8dB ± 1.5dB
in ③	100 Hz	-8.7dB ± 1.5dB	-8.5dB ± 1.5dB	-5.1dB ± 1.5dB	-9.7dB ± 1.5dB
out ⑥	1 kHz	-9.7dB ± 1.5dB	-9.5dB ± 1.5dB	-6.1dB ± 1.5dB	-9.6dB ± 1.5dB
	10 kHz	-8.6dB ± 1.5dB	-7.5dB ± 1.5dB	-2.6dB ± 1.5dB	-2.8dB ± 1.5dB

Notes: (1) 10 kohms should be inserted in series for the signal source of the input terminals.

(2) The standard output voltage should be -20db and the load impedance of the output terminals should be 1 koha.

2. EQ.PC Board (playback amplifier section: ENJ-004-2)

Pin No.	Pin function	Remarks
1	GND	For B mechanism input
2	R channel head input for mechanism B	
3	L channel head input for mechanism B	
4	Normal EQ for mechanism B	Electronic switch input (GND short-circuited)
5	R channel EQ output for mechanism B	
6	L channel EQ output for mechanism B	
7	GND	For power supply
8	+B	+12 V
9	R channel EQ output for mechanism A	
10	L channel EQ output for mechanism A	
11	Low speed EQ for mechanism A	Electronic switch input (GND short-circuited)
12	Normal EQ for mechanism A	Electronic switch input (GND short-circuited)
13	R channel head input for mechanism A	
14	L channel head input for mechanism A	
15	GND	For A mechanism input

Gain

Control	①, ② Open	① Open, ② GND	① GND, ② Open	①, ② GND
in ③	100 Hz	57.0dB ± 2dB	---	---
out ③	1 kHz	39.0dB ± 2dB	---	---
	10 kHz	27.0dB ± 2dB	31.0dB ± 2dB	32.0dB ± 2dB
in ④	100 Hz	57.0dB ± 2dB	---	---
out ④	1 kHz	39.0dB ± 2dB	---	---
	10 kHz	27.0dB ± 2dB	31.0dB ± 2dB	32.0dB ± 2dB

Control	④ Open	④ GND
in ②	100 Hz	57.0dB ± 2dB
out ⑤	1 kHz	40.0dB ± 2dB
	10 kHz	32.0dB ± 2dB
in ③	100 Hz	57.0dB ± 2dB
out ⑥	1 kHz	40.0dB ± 2dB
	10 kHz	32.0dB ± 2dB

Notes: (1) The standard output voltage should be -20db and the load impedance of the output terminals should be 10 kohms.

(2) The control for adjustment should be preset to the center.

* Reference value ---- the variable range of the control for adjustment is about 11 dB.

3.NR.PC Board (ENJ-011)

P901

Pin No.	Function name	Remarks
1	MON OUT L	Playback output
2	MON OUT R	Playback output
3	MS OUT	Music scanning signal output
4	REC SW	Record mode with +B short-circuited
5	MS SW	B mechanism with +B short-circuited
6	B IN R	B mechanism playback input(1 kHz)
7	B IN L	B mechanism playback input(1 kHz)
8	A IN L	A mechanism playback input(400 Hz)
9	A IN R	A mechanism playback input(400 Hz)
10	A MUTE	A muting with +B short-circuited
11	B MUTE	B muting with +B short-circuited
12	+B	+12 V
13	GND	Earth

P902

Pin No.	Function name	Remarks
1	+B	+12 V
2	NR SW	NR OFF with GND short-circuited
3	NR REC SW	REC with GND short-circuited
4	REC OUT L	Recording output
5	REC OUT R	Recording output
6	REC IN L	Recording input(1 kHz)
7	REC IN R	Recording input(1 kHz)
8	GND	Earth
9	REC MUTE	ALC OFF with +B short-circuited

Gain

Mode	Measurement point	Gain	Remarks
1	L P901① P902④	Input of P901⑥ and ⑦ 24.0 ± 2dB	Output of 1 kHz (Check output of P901③.)
	R P901② P902⑤		
2	L P901① P902④	Input of P901⑧ and ⑨ 24.0 ± 2dB	Output of 400 Hz (Check output of P901③.)
	R P901② P902⑤		
3	L P902④	Input of P901⑥ and ⑦ 14.0 ± 2dB	Output of 1 kHz
	R P902⑤		
4	L P901①	Input of P901⑧ and ⑨ 24.0 ± 2dB	Output of 400 Hz
	R P901②		

Note: The standard output voltage should be -20dbs and the load impedance of the output terminals should be 22 kohms.

Mode setting

Mode	A MUTE	B MUTE	REC SW	MS SW	NR REC SW	REC MUTE	NR SW
	P901⑩	P901⑪	P901④	P901⑤	P902③	P902⑥	P902②
1 (B playback)	+B	GND	GND	+B	OPEN	+B	GND
2 (A playback)	GND	+B	+B	GND	GND	+B	GND
3(A/B playback)	GND	+B	+B	GND	GND	+B	GND
4 ALC	GND	+B	+B	GND	GND	GND	GND
5 (DUBBING)	GND	+B	+B	GND	OPEN	+B	OPEN
6 (NR ON)	GND	+B	+B	GND	OPEN	+B	OPEN

Troubleshooting

Refer to the following before repairing this unit.

1. The tuner block is independent.

7-core flat wire FW201 provides the power supply of +12V, -12V (only lamp), GND and +5V, outputs L and R signals and transfers the control by the DCS line.

The DCS outputs the source switching command when the tuner key is pressed and reads the tuner key data output from the remote control unit (converted to the DCS code by the system control microcomputer).

When repairing other sections, it is better to remove the tuner block for easier repairing and checking the power supply.

Note: As the chassis ground (earth) of this unit is done via the tuner P.C.B., it should be performed from other sections using a crocodile clip, etc. When the tuner block is removed.

2. The electronic S.E.A. and the system microcomputer are independent.

The system microcomputer controls only the electronic S.E.A. reset and does not transfer data to the electronic S.E.A. control microcomputer even though the data reception line from the remote control unit is used in common.

The electronic S.E.A. control microcomputer has key and remote control unit inputs and controls the LSIs for the LCD and the electronic S.E.A. by CLK and DATA signals.

Also, when the spectrum analyzer is displayed, it inputs to the LSI for the LCD from 7-band filter IC to show the 7-band level.

3. The system microcomputer is closely related to the mechanism control microcomputer.

The system microcomputer accepts mechanism information from the mechanism control microcomputer to control the condition of the mechanism. Therefore, if the mechanism is not normal, the system microcomputer stops.

The mechanism microcomputer allows the mechanism to function by the control data from the system microcomputer to control the deck amplifier system.

The most important function is the cam motor control and the cam position data input.

Refer to the description in the previous item.

The system microcomputer has a source input, the deck's key input, DCS input and remote control unit input and controls the serial data supplied to the source select LSI, the serial data to the mechanism control microcomputer and the DCS serial data as well as the source display, mechanism condition display, capstan motor, muting and motor-driven main volume control, etc.

4. The deck mechanism is a double reverse mechanism with mechanism A (playback only) and B (recording/playback).

This mechanism is the same as the previous one.

The switches related to the mechanism, the motor (reel, cam) and the motor drive circuit are installed in the mechanism section and connected by the 20-pin socket.

If this is removed, the mechanism control microcomputer and the system microcomputer do not work.

Note: The ground (earth) of the deck mechanism section is performed via the bottom plate. Therefore, the chassis should be grounded with a crocodile clip, etc. when checking the operation (specially, checking signal lines) with the bottom plate removed. This unit does not function without a tape loaded because combined detection is performed.

5. The relay is set to OFF when headphones are plugged in.

The headphones amplifier uses the IC312 as a buffer amplifier, but the gain of this is changed. Plugging in the headphones sets the relay to OFF and it is changed to a headphones amplifier at the same time as muting is performed.

Note: The relay is not set to ON if FW307 is removed.

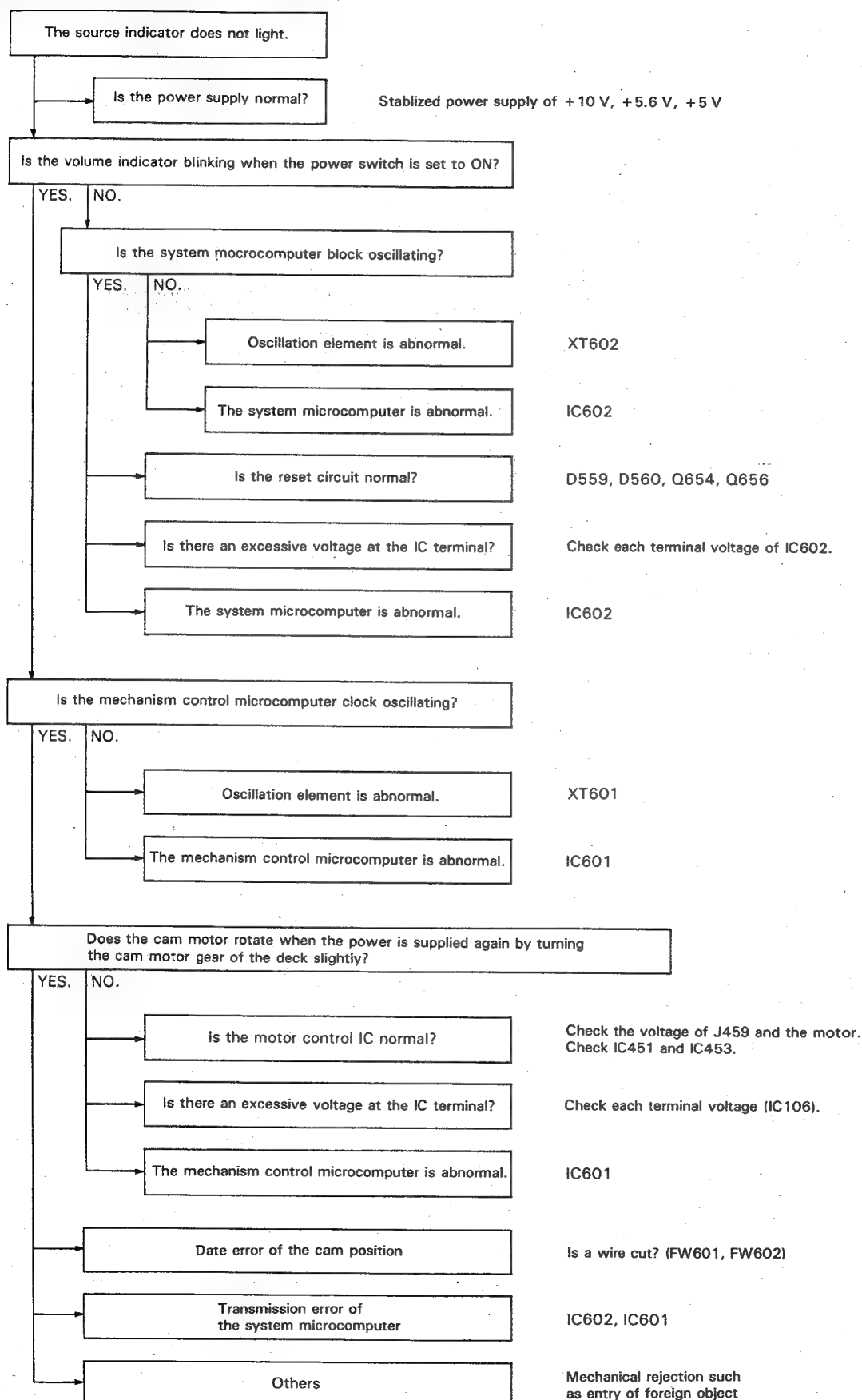
6. Microcomputer procedure when the power is supplied.

The system microcomputer is closely related to the mechanism control microcomputer as described above, but the basic clock functions independently.

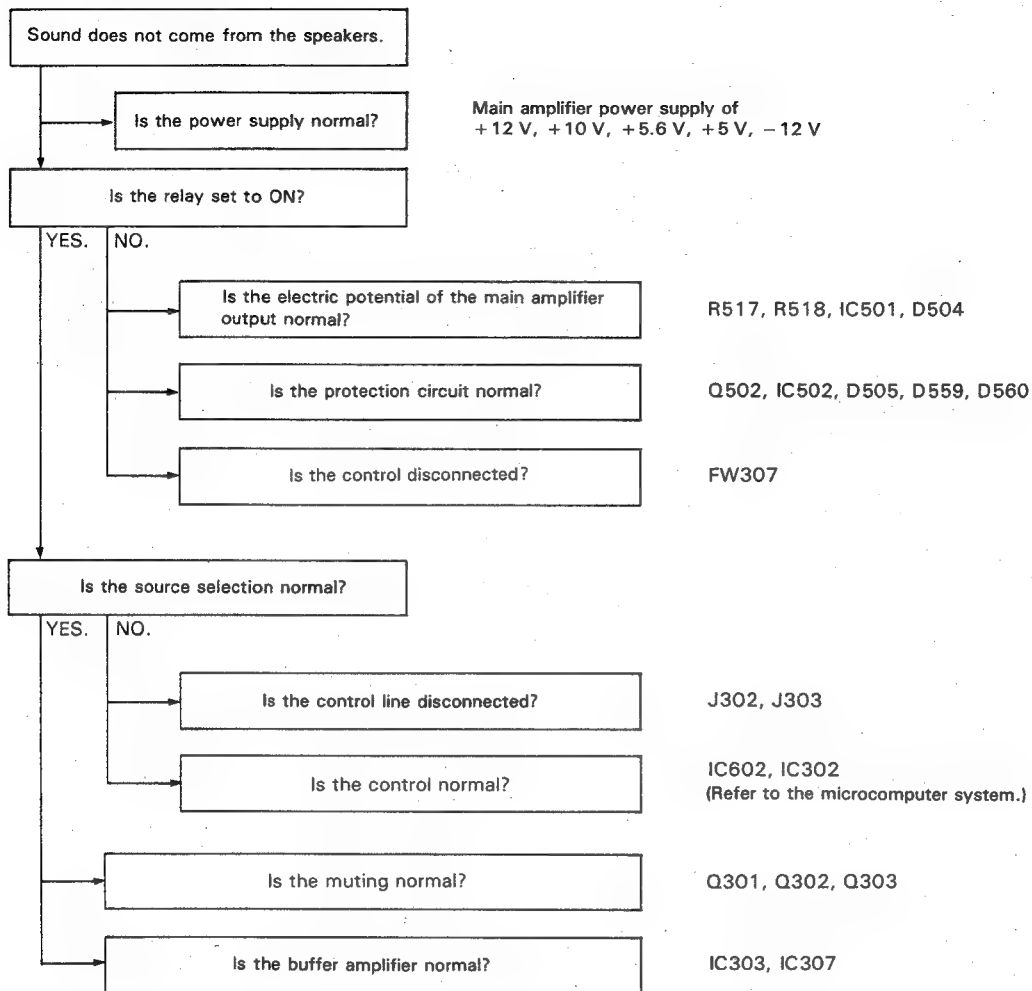
When the power is switched on, the mechanism control microcomputer initializes the mechanism and waits for a command from the system microcomputer. The system microcomputer lights the motor-driven volume indicator first and then transmits a signal to check the mechanism control microcomputer after resetting and showing the S.E.A. section; if it is OK, the system microcomputer indicates the source and condition of the mechanism.

After this, the total system functions.

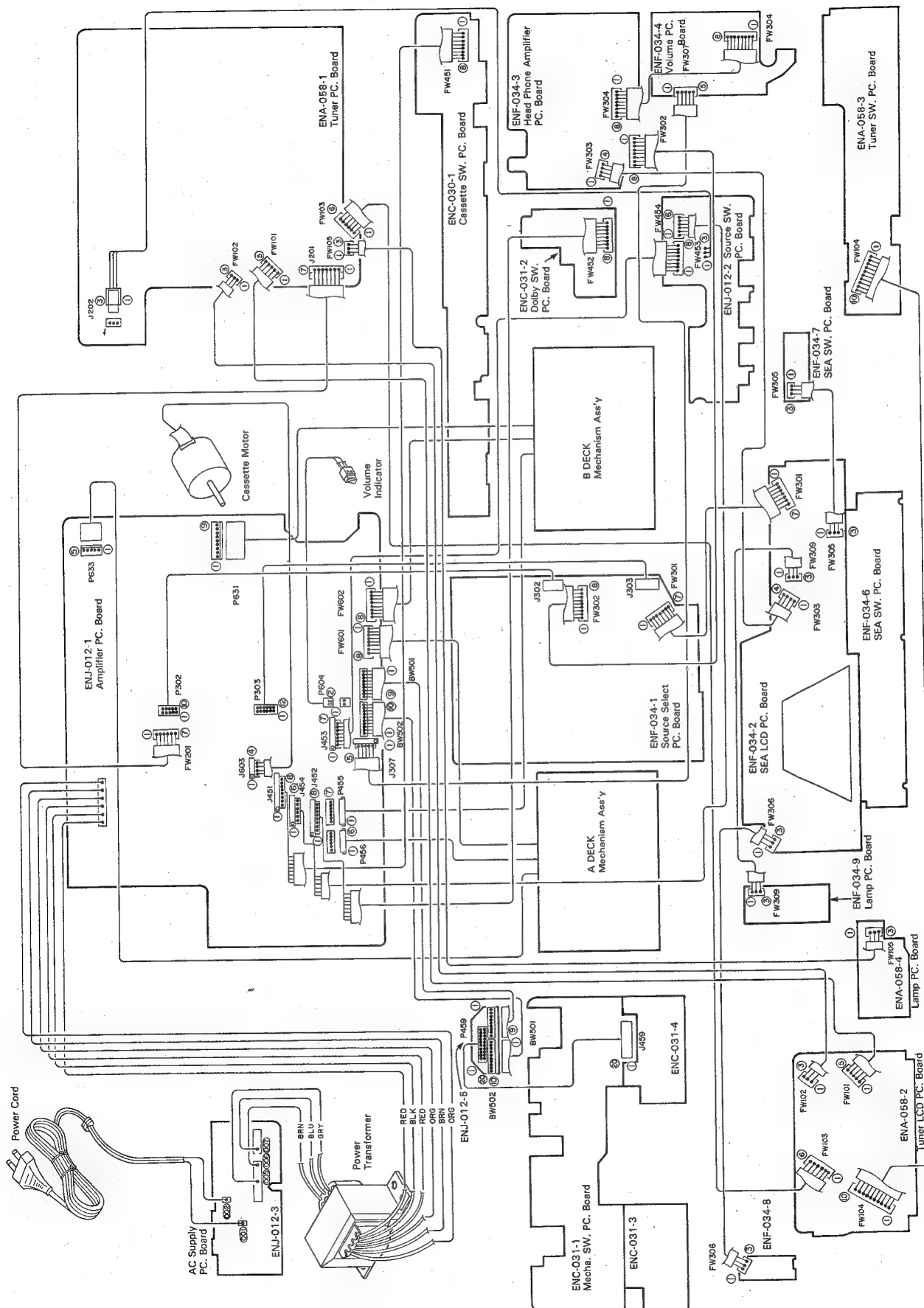
Microcomputer System (System Input)



Audio System



Connection Diagram



DR-E7BK
DR-E7LBK

JVC

VICTOR COMPANY OF JAPAN, LIMITED
AUDIO DIVISION, YAMATO PLANT, 1644, SHIMOTSURUMA, YAMATO-SHI, KANAGAWA-KEN, 242, JAPAN

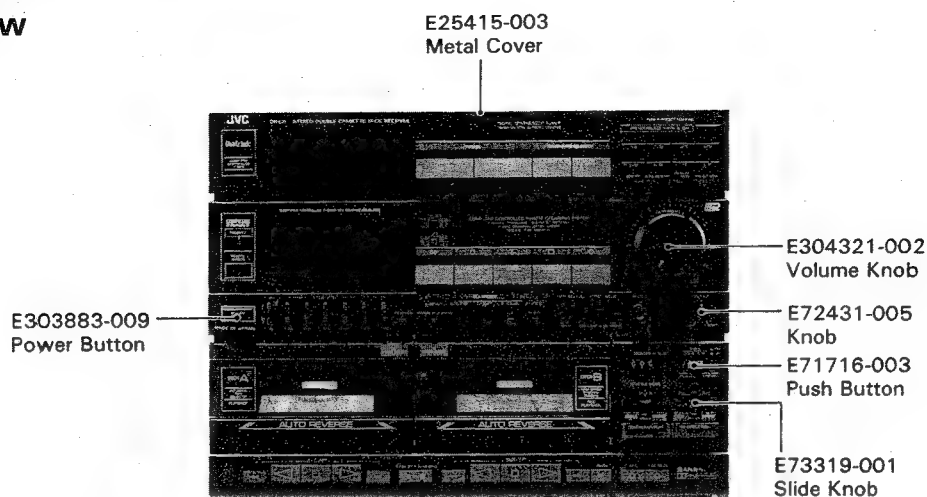
PARTS LIST

Contents

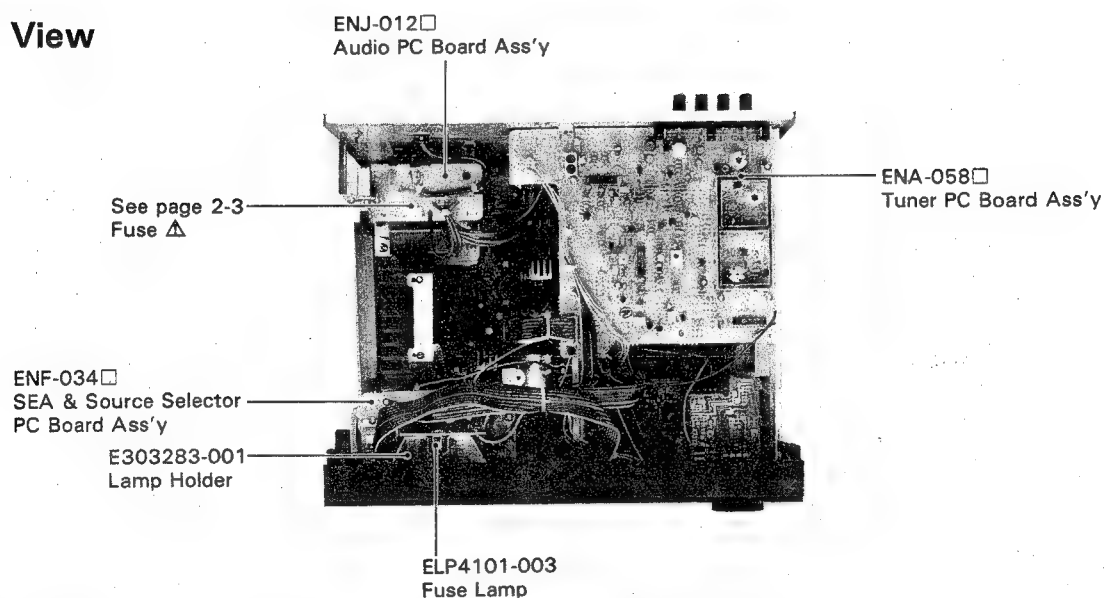
Main Parts Location	2-2
■ Top View	2-2
■ Front View	2-2
■ Rear View	2-2
Exploded View and Parts List	2-3
Mechanism Ass'y and Parts List	2-5
Printed Circuit Board Ass'y and Parts List	2-11
■ ENA-058 <input type="checkbox"/> Tuner PC Board Ass'y	2-11
■ ENC-030 <input type="checkbox"/> A Front Switch PC Board	2-14
■ ENJ-012 <input type="checkbox"/> Audio PC Board Ass'y	2-15
■ ENC-031 <input type="checkbox"/> A Motor PC Board Ass'y	2-20
■ ENF-034 <input type="checkbox"/> SEA & Source Selector PC Board Ass'y	2-21
■ ENJ-004 <input type="checkbox"/> E Equalizer PC Board Ass'y	2-25
■ ENJ-011 <input type="checkbox"/> C ALC & NR PC Board Ass'y	2-27
Packing Materials and Part Numbers	2-29
Accessories List	2-30

Main Parts Locations

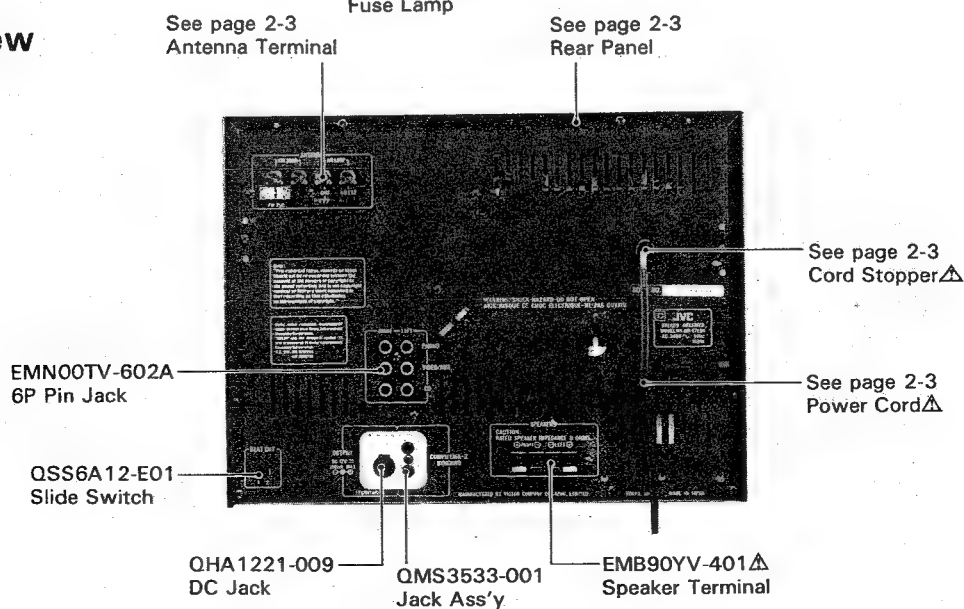
■ Front View



■ Top View



■ Rear View



Δ Safety Parts

■ Exploded View and Parts List

△	Item No.	Part Number	Part Name	Q'ty	Description	Area
	1	EFP-DRE7BKE	Front Panel Ass'y	1		A, U, P, PG
	1-1	EFP-DRE7LBKE	Front Panel Ass'y	1		E, G, BS
		E11334-006	Front Panel	1		A, U, P, PG
		E11334-007	Front Panel	1		E, G, BS
	1-2	E72437-004	Sheet	1		
	1-3	E69777-001	Ref. Plate	2		
	1-4	E72437-006	Sheet	1		
	1-5	E72436-007	Screen	1		
	1-6	E304326-003	Cassette Panel	1		
	1-7	E25580-001	Tuner Window	1		A, U, P, PG
	1-8	E25580-002	Tuner Window	1		E, G, BS
		E25582-001	Amp. Window	1		
	2	E304321-002	Volume Knob	1		
	3	SLT-25VR52P	L.E.D.	1	Red	
	4	E304320-002	Holder	1		
	5	BWS142-003	Socket Wire	1		
	6	E72431-005	Knob	2		
	7	E73305-008	Indicator Plate B	1		
	8	E73305-009	Indicator Plate A	1		
	9	E25412-002	Cassette Holder	1		
	10	VKY4180-001	Holder Spring	4		
	11	E304362-002	LED Holder	2		
	12	E73308-001	Holder Cover	2		
	13	SBSB3008M	Screw	4		
	14	SHST3006M	Screw	2		
	15	E73319-001	Slide Knob	2		
	16	E71716-002	Push Button	1		
	17	E69907-007	Push Knob	1		
	18	E48729-008	Plastic Rivet	7		
	19	SBSF3008Z	Screw	13		
	20	SBSF3006Z	Screw	1		
	21	E73310-001	Damper Gear	2		
	22	E73311-001	Damper Holder	2		
	23	SBSF3012Z	Screw	2		
	24	E73312-001	Holder Bracket A	1		
	25	E73315-002	Holder Spring	1		
	26	E73314-002	Holder Spring	1		
	27	E73313-001	Holder Bracket B	1		
	28	VKL5500-002	Lock Bracket (R)	1		
	29	VKL5345-002	Lock Cam (R)	1		
	30	VKN3006-074	Spring	1		
	31	REE2000	E Ring	2		
	32	VKN3006-073	Spring	1		
	33	VKL5342-002	Lock Cam (A)	1		
	34	VKN5501-00A	Lock Bracket (L)	1		
	35	SST2605Z	Screw	4		
	36	E304340-001	Counter	1		
	37	E73318-001	Belt	1		
	38	VKL3827-001	Bracket	1		
	39	VKN5924-002	Spring	1		
	40	VKZ4001-009	Wire Holder	1		
	41	SDSP2604Z	Screw	8		
	42	SDST2608Z	Screw	2		
	43	VKY4279-001	Pack Spring	2		
	44	SDST2608Z	Screw	10		
	45	E304300-002	Volume Bracket	1		
	46	VKL6088-001	Joint Bracket	1		
	47	VKL5948-001	Bracket	1		
	48	VKL5964-001	Bracket	1		
	49	SDST2605Z	Screw	2		
	50	E304657-001	Stay Bracket	1		
	51	E73005-002	Sheet	1		
	52	E303283-001	Lamp Holder	1		
	53	ELP4101-003	Fuse Lamp	2		
	54	E304304-001	Side Bracket	1		
	55	E25415-003	Metal Cover	1		
	56	SDSE3008M	Screw	10		
	57	E304303-002	LCD Bracket	1		
	58	SBSB3008M	Screw	23		
	59	E73316-002	LCD Screen	1		
	60	E304301-001	Lamp House	1		
	61	EX0040010R10S10	Felt Spacer	2		
	62	E25150-012	Bottom Plate	1		
	63	E303921-004	Side Bracket	1	R	
	64	E303922-008	Center Bracket	1		
	65	E303920-004	Side Bracket	1	L	
	66	E47227-023	Foot	4		
	67	E68587-004	C.B.Bracket	1		
	68	SBSF3008M	Screw	3		

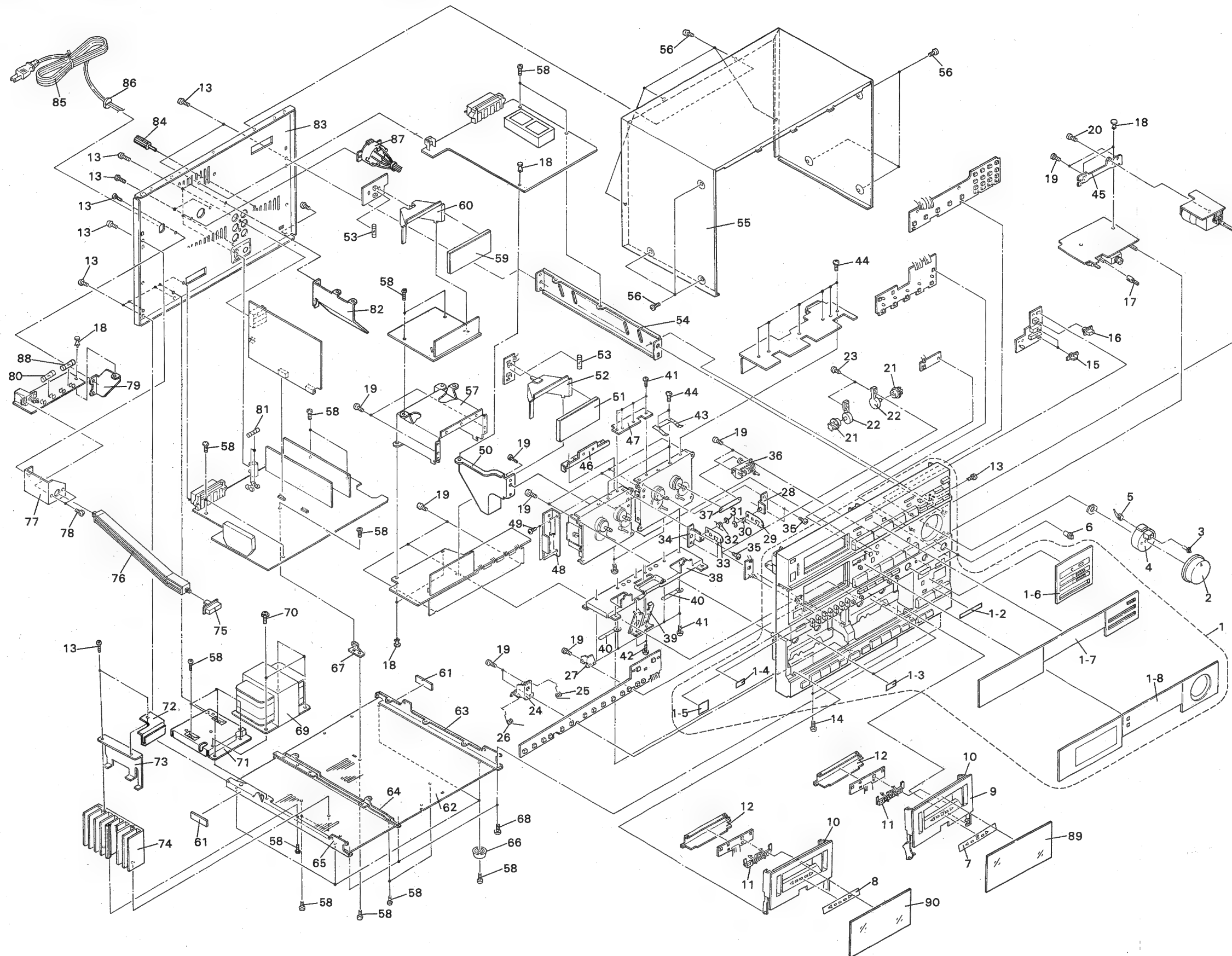
△	Item No.	Part Number	Part Name	Q'ty	Description	Area
△ △ △	69	ETP1100-16FA ETP1100-16EA ETP1100-16EABS	Power Transformer Power Transformer Power Transformer	1 1 1		U,P,PG A,E,G BS
	70	E65389-002	Ass'y Screw	4		
	71	E304610-001	Trans. Bracket	1		
	72	E73876-001	Cover	1		
	73	E73875-002	Leaf Spring	1		
	74	E304760-001	Heat Sink	1		
	75	E303883-009	Power Button	1		
	76	E304302-002	Push Shaft	1		
	77	E72226-002	Switch Bracket	1		
△ △ △ △	78	SBST3006Z	Screw	2		
	79	E72331-002	Stay Bracket	1		
	80	QMP51A2-3R15S	Fuse	1	F001	U,P,PG
		QMP51A2-1R6S	Fuse	1	F001	A,E,G
		QMP51E2-1R6SBS	Fuse	1	F001	BS
△ △	81	QMP51A2-1R25S	Fuse	1		Except BS
		QMP51E2-1R25SBS	Fuse	1		BS
	82	E302782-001	Stay Bracket	1		
	83	E25413-037	Rear Panel	1		U,P,PG
		E25413-038	Rear Panel	1		A
		E25413-039	Rear Panel	1		E
		E25413-040	Rear Panel	1		G
		E25413-041	Rear Panel	1		BS
△	84	E70078-001	GND. Terminal	1		
	85	QMP7600-200	Power Cord	1		U,P,PG
△ △ △ △ △ △		QMP2560-244	Power Cord	1		A
		QMP3900-200	Power Cord	1		E,G
		QMP9017-008BS	Power Cord	1		BS
	86	QHS3876-162	Cord Stopper	1		Except BS
		QHS3876-162BS	Cord Stopper	1		BS
△ △	87	QSR0085-007	Voltage Selector	1		U,P,PG
	88	QMP51A2-1R6S	Fuse	1	F002	U,P,PG
	89	E304324-005	Cassette Lid	1		
	90	E304322-006	Cassette Lid	1		

The Marks for Designated Areas

A	Australia	BS	U.K.
E	Europe	P,PG	U.S. Military Market
G	West Germany	U	Other Countries

No mark indicates all areas.

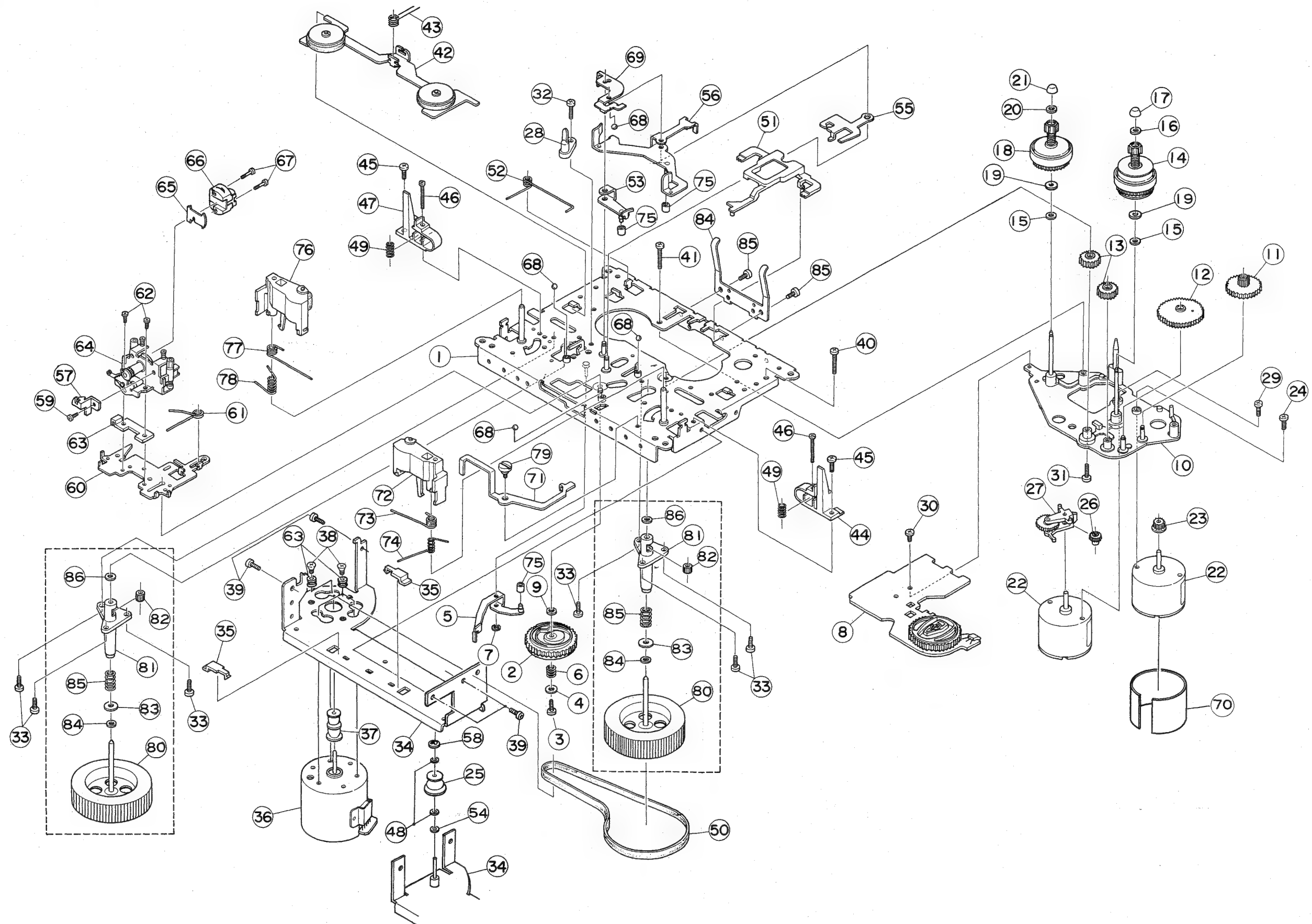
Exploded View and Parts Numbers



DR-E7BK
DR-E7LBK

DR-E7BK
DR-E7LBK

Mechanism Ass'y and Parts List



△	Item No.	Part Number	Part Name	Q'ty	Description	Area
	1	VKL2251-001	Chassis Base Ass'y	1		
	2	VKS2122-001	Pinch Roller Cam	1		
	3	VKZ4377-001	Screw	1		
	4	VKZ4284-003	Washer	1		
	5	VKL5333-00D	Head Lever Ass'y	1		
	6	VKW3001-159	Spring	1		
	7	REE1500	E Ring	1		
	8	VKZ3127-00D	Cam Switch Ass'y	1		
	9	VKZ4003-010	Felt	1		
	10	VKL2173-00C	Disc Base	1		
	11	VKR3001-001	Gear (2)	1		
	12	VKR3001-002	Gear (2)	1		
	13	VKR3000-001	Gear (1)	2		
	14	VKR4312-00B	Reel Disc Ass'y	1	A Mechanism	
		VKR4312-00A	Reel Disc Ass'y	1	B Mechanism	
	15	VKZ4003-010	Felt	2	Back Tension	
	16	VKR4170-001	Ring	1		
	17	VKS4131-001	Reel Stopper	1		
	18	VKR4319-00A	Reel Disc (L)	1		
	19	Q03093-834	Washer	2		
	20	VKR4170-001	Ring	1		
	21	VKS4131-001	Reel Stopper	2	Cam, Reel	
	22	MHN-6C2RK	DC Motor	1	Cam Motor	
	23	VKR4326-001	Motor Gear	1	Cam Motor	
	24	SDSP2606Z	Screw	1		
	25	VKR4445-001	Pulley	1	A Mechanism	
	26	VKR3000-003	Gear (1)	1		
	27	VKS4503-00D	F/R Unit Ass'y	1		
	28	VKS4512-002	Guide Post	1		
	29	SDSP2606Z	Screw	1	Reel Motor	
	30	SDST2604Z	Screw	1	Disc Base Unit	
	31	SDST2608Z	Screw	1		
	32	SDST2606Z	Screw	1		
	33	SDST2605Z	Screw	6		
	34	VKL3720-00B	Bracket Ass'y	1	A Mechanism	
		VKL3739-003	P.M.Bracket	1	B Mechanism	
	35	VKS4437-001	Thrust Plate	2		
	36	BFR2L92	DC Motor	1	B Mechanism	
	37	VKR4446-001	Motor Pulley	1	B Mechanism	
	38	18211202T	Screw	3	B Mechanism Motor	
	39	SDST2606Z	Screw	4	FM Bracket	
	40	SPSP2615Z	Screw	1	Cam Motor	
	41	SPSP2613Z	Screw	1	Reel Motor	
	42	VKL3411-00A	Take Up Idler	1		
	43	VKW3006-099	Torsion Spring	1	Take Up	
	44	VKS4815-001	Cassette Guide (R)	1		
	45	SDST2606Z	Screw	2		
	46	SPSP2615Z	Screw	2		
	47	VKS4816-001	Cassette Guide (L)	1		
	48	Q03093-834	Washer	2		
	49	VKW3001-170	Spring	2		
	50	VKB3001-029	Belt	1	A Mechanism	
		VKB3001-028	Belt	1	B Mechanism	
	51	VKS3162-004	Brake Lever	1		
	52	VKW4597-002	Torsion Spring	1		
	53	VKL5316-00D	Head Base Arm	1		
	54	VKZ4003-010	Felt	1		
	55	VKL5318-003	Head Arm	1		
	56	VKL3413-00B	Pinch Roller Lever	1		
	57	VKS4931-001	Wire Holder	1		
	58	REE2000	E Ring	1		
	59	SPSH2018M	Mini Screw	1		
	60	VKL3683-002	Head Base	1		
	61	VKW4467-004	Spring	1		
	62	SPSM2025M	Screw	2		
	63	18201306T	Rubber Cushion	3		
	64	VKL3793-00A	Head Mount Base	1		
	65	VKZ4271-002	Wire Stopper	1		
	66	VGH0425-525	R/P Head	1	B Mechanism	
		VGH0424-020	Playback Head	1	A Mechanism	
	67	VKZ4291-002	Head Screw	2		
	68	T41615-004	Steel Ball	4		
	69	VKY4425-002	Spring Plate	1		
	70	FE-ZMS409	Motor Core	1		
	71	VKL5491-001	Door Safety	1	A Mechanism	
		VKL5492-002	Door Safety	1	B Mechanism	
	72	VKP4169-00B	Pinch Roller	1	Right	
	73	VKW3006-130	Spring	1	Pinch Roller	
	74	VKW3006-142	Spring	1	Return A Mecha (Right)	
		VKW3006-057	Torsion Spring	1	Return B Mecha (Left)	

△	Item No.	Part Number	Part Name	Q'ty	Description	Area
	75	VKH3000-058	Collar	3		
	76	VKP4171-00B	Pinch Roller	1	Left	
	77	VKW3006-131	Spring	1	Pinch Roller	
	78	VKW3006-060	Spring	1	Return A Mecha	
		VKW3006-143	Spring	1	Return B Mecha	
	79	VKZ4323-001	Screw	1		
	80	VKF3138-00B	Fly Wheel	2		
	81	VKP4122-00C	Capstan Metal	2		
	82	VKR4180-002	Roller	2		
	83	Q03093-622	Washer	2		
	84	Q03093-827	Washer	2		
	85	VKW3001-010	Spring	2		
	86	Q03093-522	Washer	2		

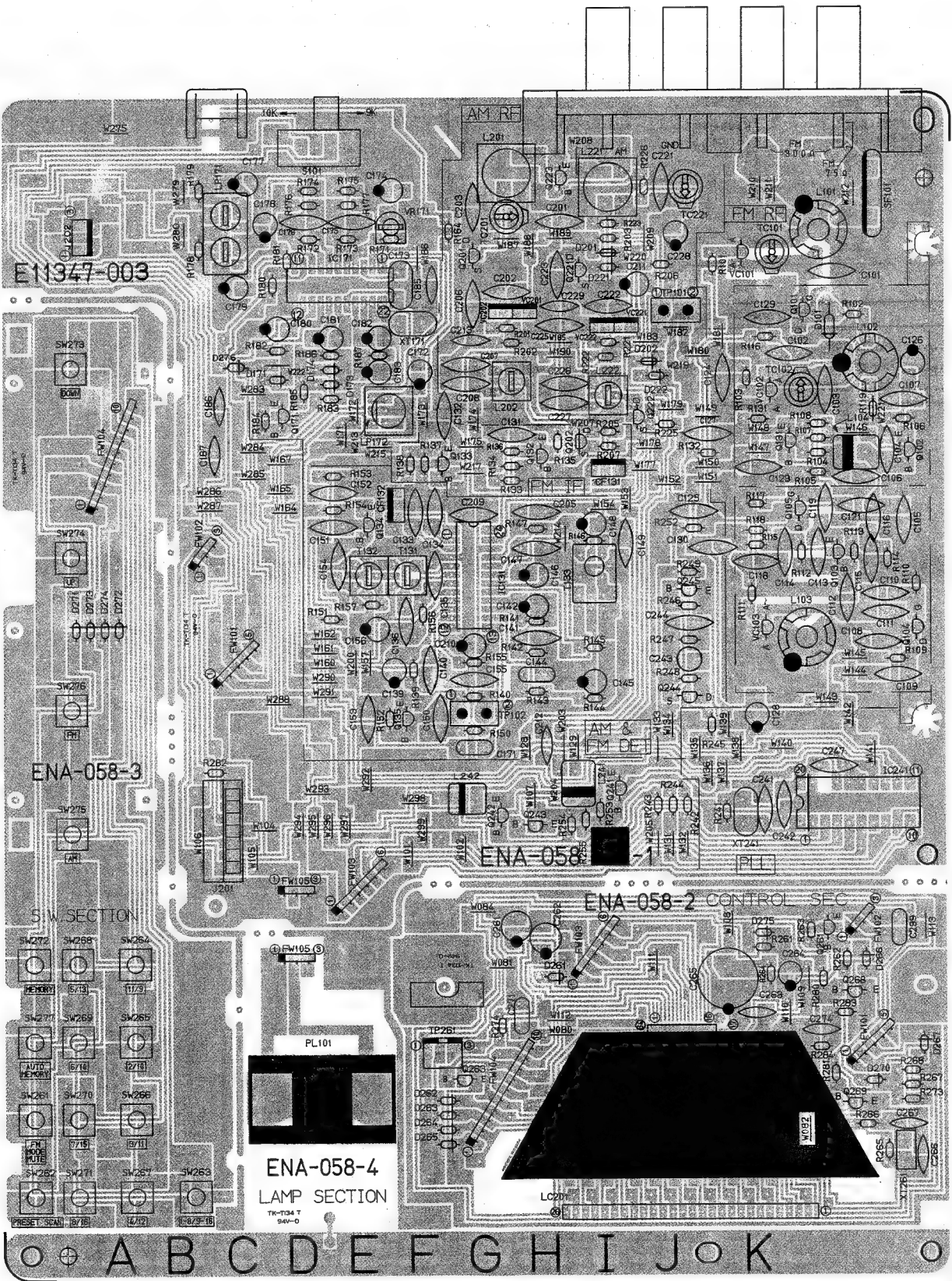
The Marks for Designated Areas			
A	Australia	BS	U.K.
E	Europe	P,PG	U.S. Military Market
G	West Germany	U	Other Countries

No mark indicates all areas.

Printed Circuit Board Ass'y and Parts List

■ ENA-058 □ Tuner PC Board Ass'y

Note: ENA-058 □ Varies according to the areas employed. See note (1) when placing an order.



Note (1)

PC Board Ass'y	Designated Areas
ENA-058 <input type="checkbox"/> C	U.S. Military Market & Other Countries
ENA-058 <input type="checkbox"/> D	Australia
ENA-058 <input type="checkbox"/> E	Europe
ENA-058 <input type="checkbox"/> F	West Germany
ENA-058 <input type="checkbox"/> G	U.K.

TRANSISTORS

ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
Q101	2SK606 (Q, R)	F.E.T	MATSUSHITA	F
Q102	2SC535 (B, C)	SILICON	HITACHI	
Q103	2SC461 (C)	SILICON	HITACHI	
Q104	2SK606 (Q, R)	F.E.T	MATSUSHITA	
Q105	2SK606 (Q, R)	F.E.T	MATSUSHITA	
Q131	2SC461 (B, C)	SILICON	HITACHI	F
Q132	2SC535 (B, C)	SILICON	HITACHI	
Q133	2SC461 (B, C)	SILICON	HITACHI	
Q134	2SC535 (B, C)	SILICON	HITACHI	
Q135	2SC461 (B, C)	SILICON	HITACHI	
Q171	2SC1685 (R, S)	SILICON	MATSUSHITA	H
Q201	2SK301 (Q, R)	F.E.T	MATSUSHITA	
Q202	2SK301 (P, Q)	F.E.T	MATSUSHITA	
Q202	2SK301 (P, Q)	F.E.T	MATSUSHITA	
Q202	2SK301 (P, Q)	F.E.T	MATSUSHITA	
Q221	2SK301 (Q, R)	F.E.T	MATSUSHITA	E
Q221	2SK301 (Q, R)	F.E.T	MATSUSHITA	
Q221	2SK301 (Q, R)	F.E.T	MATSUSHITA	
Q222	2SK301 (P, Q)	F.E.T	MATSUSHITA	
Q222	2SK301 (P, Q)	F.E.T	MATSUSHITA	
Q222	2SK301 (P, Q)	F.E.T	MATSUSHITA	G
Q223	2SD1302 (S, T)	SILICON	MATSUSHITA	
Q223	2SD1302 (S, T)	SILICON	MATSUSHITA	
Q223	2SD1302 (S, T)	SILICON	MATSUSHITA	
Q241	2SA564A (R, S)	SILICON	MATSUSHITA	
Q242	2SA564A (R, S)	SILICON	MATSUSHITA	E
Q243	2SA564A (R, S)	SILICON	MATSUSHITA	
Q243	2SA564A (R, S)	SILICON	MATSUSHITA	
Q243	2SA564A (R, S)	SILICON	MATSUSHITA	
Q244	2SK301 (Q1)	F.E.T	MATSUSHITA	
Q245	2SC458 (D)	SILICON	HITACHI	E
Q261	2SC1685 (R, S)	SILICON	MATSUSHITA	
Q263	2SC1685 (Q, R)	SILICON	MATSUSHITA	
Q268	2SC1685 (R, S)	SILICON	MATSUSHITA	
Q269	2SC1685 (R, S)	SILICON	MATSUSHITA	

I.C.S

ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
IC131	LA1267S	I.C.	SANYO	F
IC171	LA3401	I.C.	SANYO	
IC241	LM7000N	I.C.	SANYO	
IC261	LC5813H-246	I.C.	SANYO	

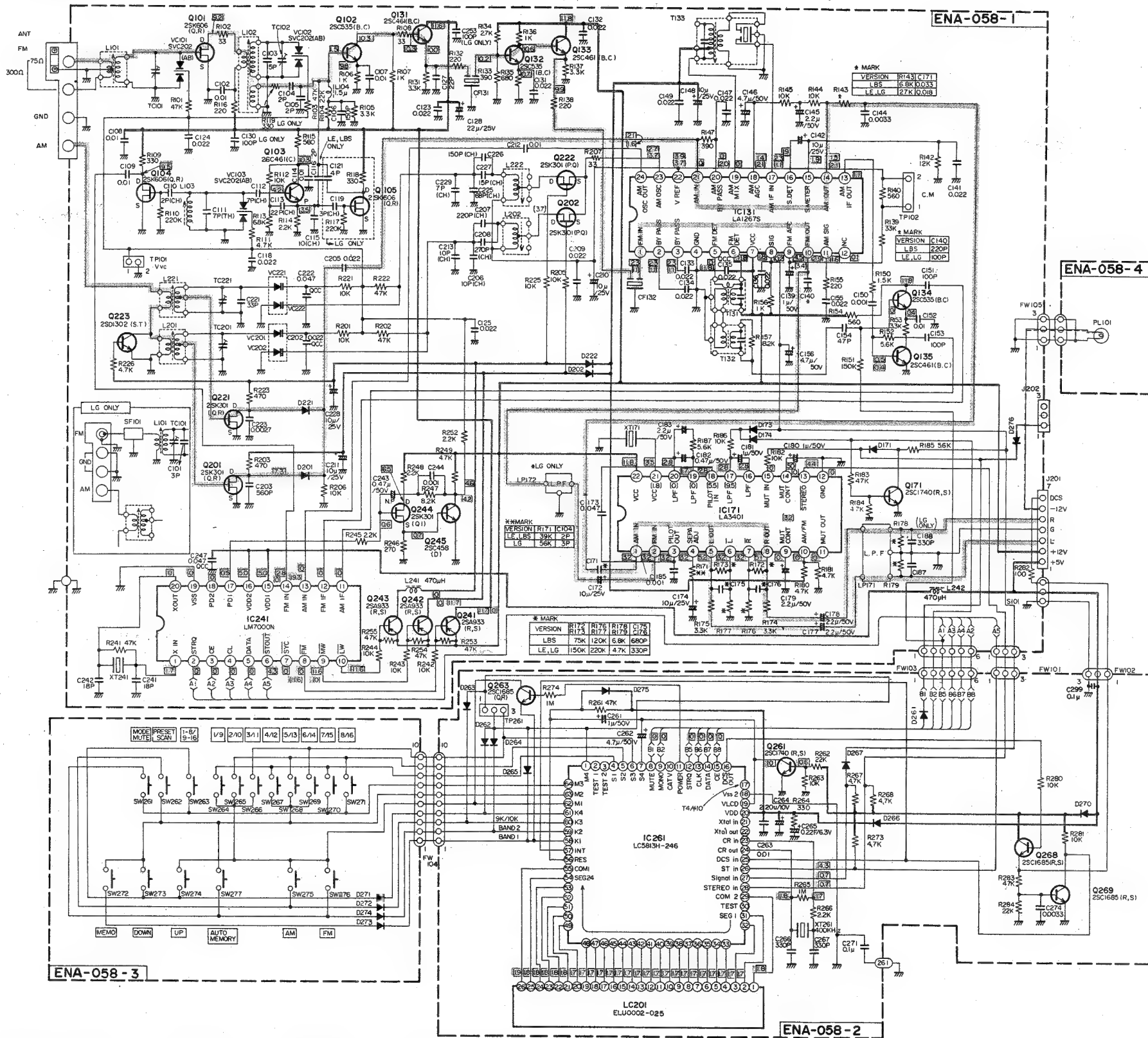
DIODES

ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
D171	1SS133	SILICON	ROHM	E
D173	1SS133	SILICON	ROHM	
D174	1SS133	SILICON	ROHM	
D201	1SS133	SILICON	ROHM	
D201	1SS133	SILICON	ROHM	
D201	1SS133	SILICON	ROHM	H
D202	1SS133	SILICON	ROHM	
D202	1SS133	SILICON	ROHM	
D202	1SS133	SILICON	ROHM	
D221	1SS133	SILICON	ROHM	
D221	1SS133	SILICON	ROHM	F
D221	1SS133	SILICON	ROHM	
D222	1SS133	SILICON	ROHM	
D222	1SS133	SILICON	ROHM	
D222	1SS133	SILICON	ROHM	
D261	1SS133	SILICON	ROHM	E
D262	1SS133	SILICON	ROHM	
D262	1SS133	SILICON	ROHM	
D262	1SS133	SILICON	ROHM	
D263	1SS133	SILICON	ROHM	
D263	1SS133	SILICON	ROHM	D
D263	1SS133	SILICON	ROHM	
D263	1SS133	SILICON	ROHM	
D263	1SS133	SILICON	ROHM	
D264	1SS133	SILICON	ROHM	
D264	1SS133	SILICON	ROHM	D
D264	1SS133	SILICON	ROHM	
D264	1SS133	SILICON	ROHM	
D264	1SS133	SILICON	ROHM	
D266	1SS133	SILICON	ROHM	
D267	1SS133	SILICON	ROHM	D
D270	1SS133	SILICON	ROHM	
D271	1SS133	SILICON	ROHM	
D272	1SS133	SILICON	ROHM	
D273	1SS133	SILICON	ROHM	
D274	1SS133	SILICON	ROHM	D
D275	1SS133	SILICON	ROHM	
D276	1SS133	SILICON	ROHM	
VC101	SVC202 (AB)	VALICAP	SANYO	
VC102	SVC202 (AB)	VALICAP	SANYO	
VC103	SVC202 (AB)	VALICAP	SANYO	E
VC201	KV1236Z	VALICAP	TOKO	
VC202	KV1236Z	VALICAP	TOKO	
VC221	KV1236Z	VALICAP	TOKO	
VC222	KV1236Z	VALICAP	TOKO	
VC222	KV1236Z	VALICAP	TOKO	G
VC222	KV1236Z	VALICAP	TOKO	
VC222	KV1236Z	VALICAP	TOKO	
VC222	KV1236Z	VALICAP	TOKO	
VC222	KV1236Z	VALICAP	TOKO	




CAPACITORS

ITEM	PART NUMBER	DESCRIPTION	AREA
C101	QCS21HJ-3R0	3.0PF 50V CERAMIC	F
C102	QCF21HP-103	0.01MF 50V CERAMIC	
C103	QCS21HJ-5R0	5.0PF 50V CERAMIC	
C104	QCS21HJ-2R0	2.0PF 50V CERAMIC	
C104	QCS21HJ-2R0	2.0PF 50V CERAMIC	
C104	QCS21HJ-2R0	2.0PF 50V CERAMIC	E
C104	QCS21HJ-2R0	2.0PF 50V CERAMIC	
C104	QCS21HJ-3R0	3.0PF 50V CERAMIC	
C105	QCS21HJ-2R0	2.0PF 50V CERAMIC	
C105	QCS21HJ-2R0	2.0PF 50V CERAMIC	

Schematic Diagrams



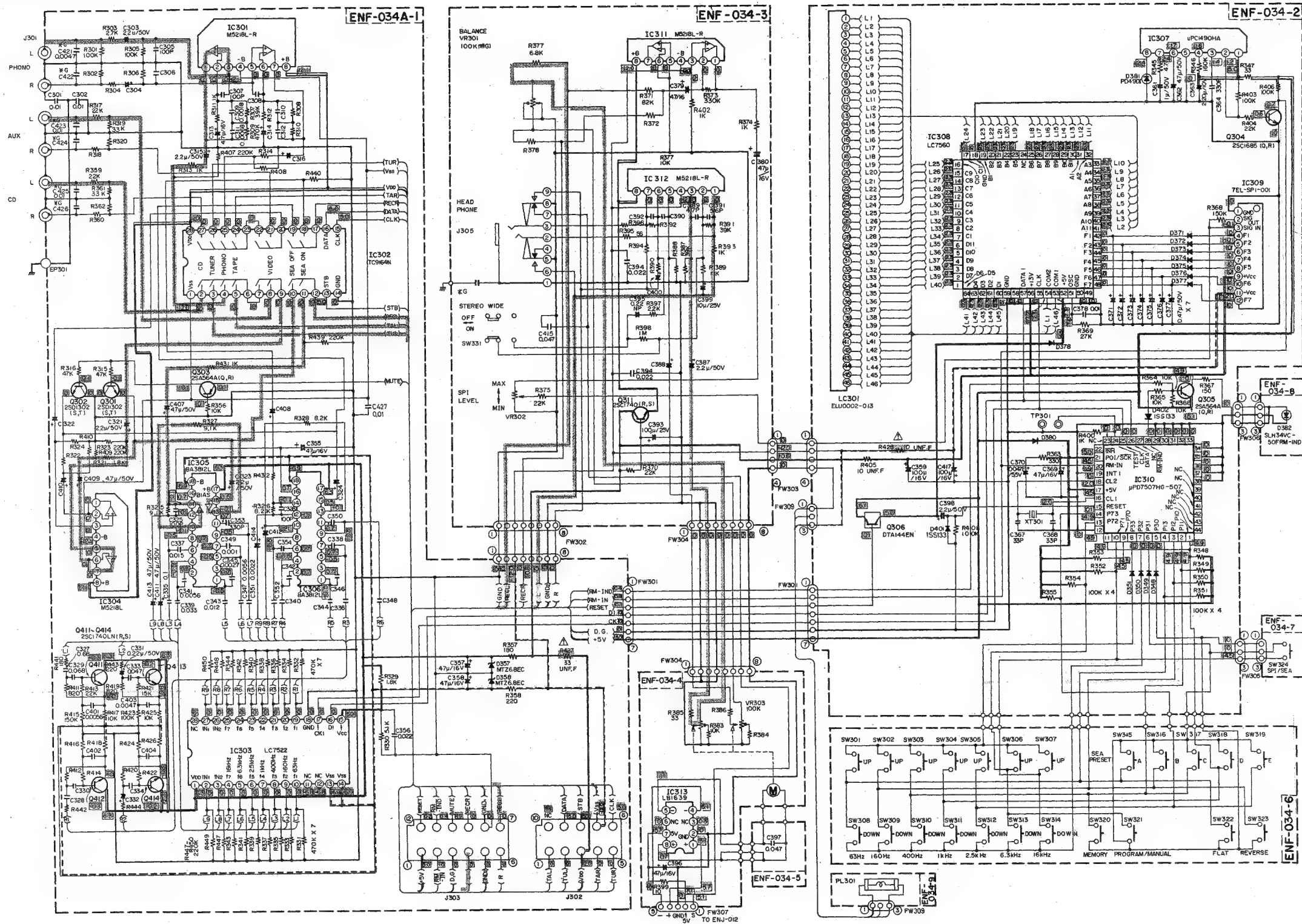
Notes:

1. shows DC voltage to the chassis with no signal input.
 2.  indicates positive B power supply.
 3. indicates negative B power supply.
 4.  indicates signal path.
5. When replacing the parts in the darkened are () and those marked with  , be sure to use the designated parts to ensure safety.
 6. This is the standard circuit diagram.
The design and contents are subject to change without notice.





DR-E7BK
DR-E7LBK





(3) SEA & Source Selector Section

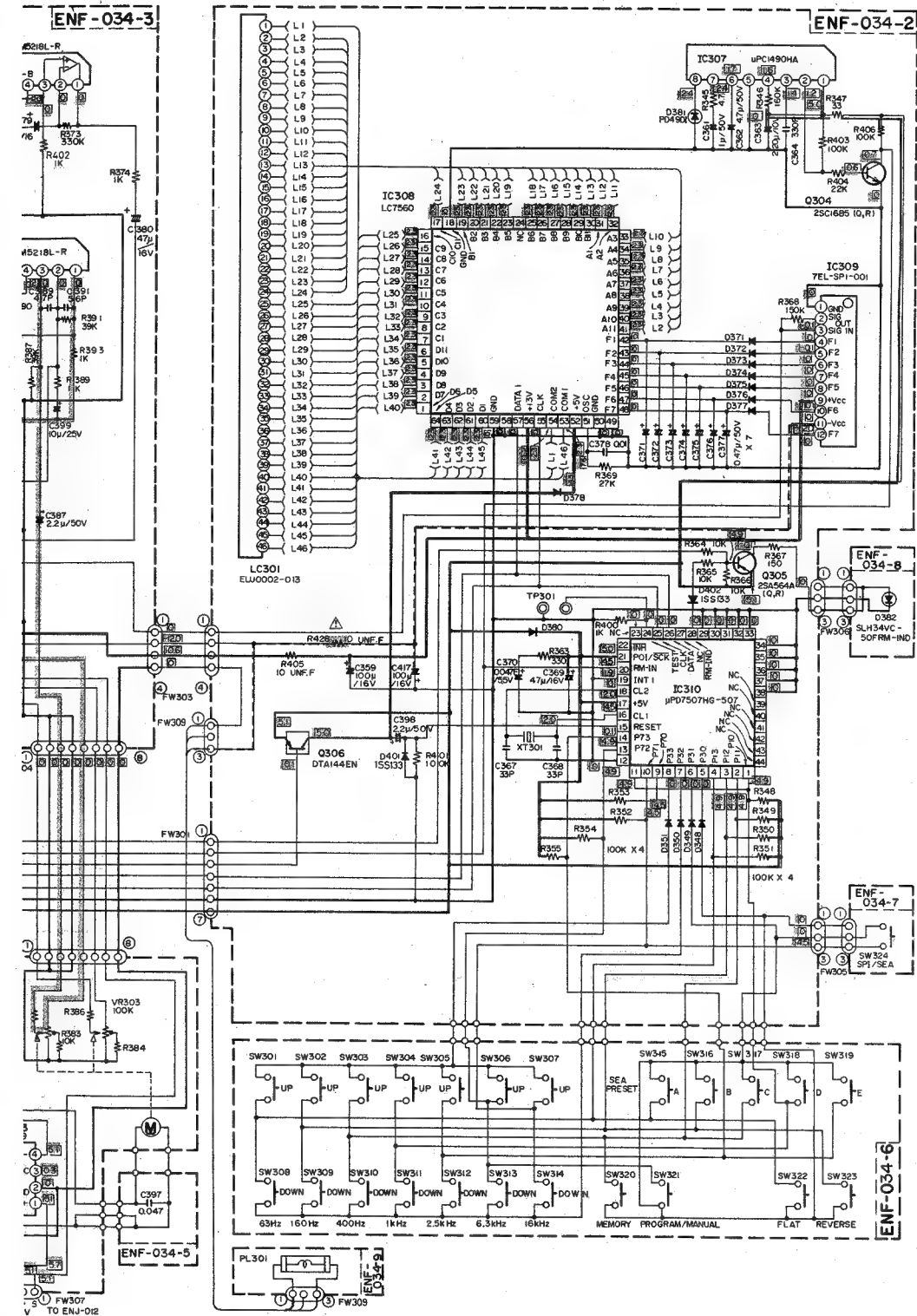


Notes:

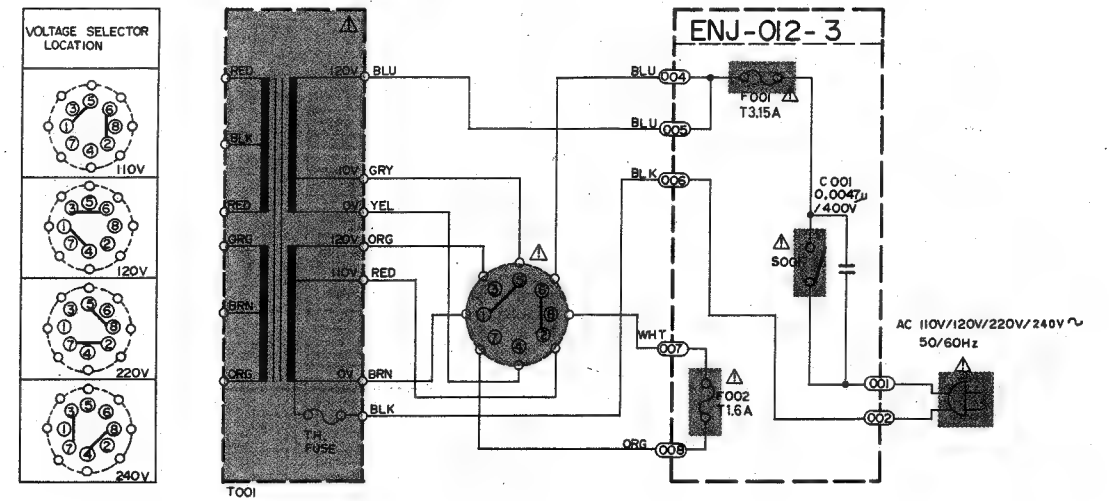
1.  shows DC voltage to the chassis with no signal input.
2.  indicates positive B power supply.
3.  indicates negative B power supply.
4.  indicates signal path.

5. When replacing the parts in the darkened area () and those marked with  , be sure to use the designated parts to ensure safety.
6. This is the standard circuit diagram.
The design and contents are subject to change without notice.

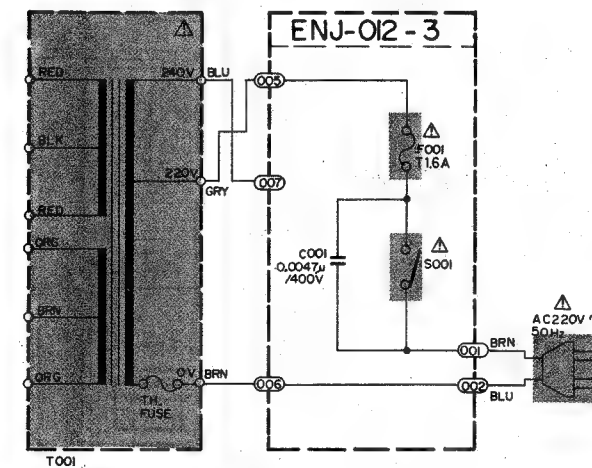
(4) Power Supply Section



(U) FOR OTHER COUNTRIES & (P)(PG) FOR PACEX.....U.S. Military Market

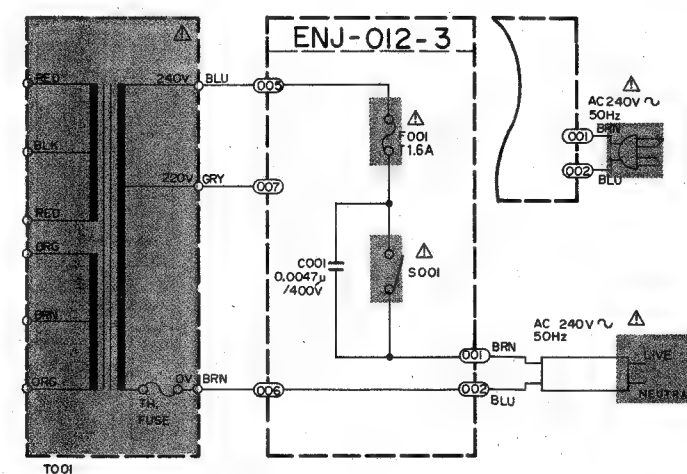


(G) FOR WEST GERMANY
(E) FOR CONTINENTAL EUROPE

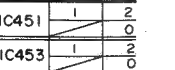


(BS) FOR U.K.

(A) FOR AUSTRALIA



(6) Tab



DR-E7BK
DR-E7LBK

DR-E7BK
DR-E7LBK

(6) Table of Terminal Voltage

ENJ-012-1

IC501	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18						
	-0.1	-0.1	0	-12.8	-1.3	0	0	0	-46.7	0	46.9	45.2	0	-46.7	-1.3	0	-0.1	-0.1						
IC502	1	2	3	4	5	6	7	8	9															
	-0.6	0	0	0	-0.7	1	0	13	3.0															
IC601	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	0.3	0	0.3	0	0	0	0	0	0	0	0.3	0	0	0	0.3	0	0	0	0	5.0		5.1		5.1
	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
	5.1	5.1	5.1	0	0	0	0	5.1	5.1	0.1	0		5.0	0	2.7			5.0	5.0	4.9	0	5.0	5.0	5.1
	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64								
	0	5.1	2.3	2.4	0	4.9	0	3.8	5.1	0		5.0	0	0	2.7									
IC602	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	5.1	5.1	0.7	5.1	0	0	0	0	0.5	0.5	5.1	0	0	0	0	0	5.1	5.1	5.0	5.0	5.1	5.1	0.1	0.1
	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
	5.1	5.1	0	0	0	0	0	5.1	5.1	5.1	5.1	5.1	0.3	5.1	0.3	5.1	5.1	5.1	5.1	5.1	5.1	2.7	2.5	5.1
	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64								
	0.1	5.0	5.1	5.1	5.1	5.1	0.3	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	0								
IC631	1	2	3	4	5	6	7	8	9	10	11	12	13	14										
	0	0	0	0	0	5.0	11.8	11.8	5.0	0	0	0	0	0										

Q501	Q502	Q551	Q552	Q553	Q554	Q555	Q556
Q501	Q502	Q551	Q552	Q553	Q554	Q555	Q556
B	C	E	B	C	E	B	C
-46.8	0	4.9	1	5.5	10.4	20.4	9.8
Q557	Q558	Q559	Q611	Q631	Q632	Q633	Q634
B	C	E	B	C	E	B	C
-12.9	-17.2	-12.3	-13.5	-17.2	-12.9	5.7	9.9
Q651	Q652	Q654	Q655	Q656	Q657	Q658	Q659
B	C	E	B	C	E	B	C
5.0	0	0	5.0	0	-0.2	5.1	0
Q660	Q661	Q662	Q663	Q664	Q665	Q666	Q667
B	C	E	B	C	E	B	C
5.1	0	5.1	0.6	0	0.6	0	0
Q668	Q645						
B	C	E	B	C	E	B	C
0.1	8.4	0	4.4	0	0		

FW601	1	2	3	4	5	6	7	8	FW602	1	2	3	4	5	6	7	8
FW601	12.0	0	0	0	0.3	0.3	0	0	FW602	12.0	0	0	0	0.3	0.3	0	0

J307	1	2	3	4	5	J452	1	2	3	4	5	6	7	8	J453	1	2	3	4	5	6	7
	0	5.7	0	5.1	5.0		0	5.1	5.1	5.1	0	0	0	5.1		5.1	5.1	0.3	5.1	5.1	5.1	
J454	1	2	3	4	5	6	7															
	5.1	5.1	0	0	0	0	0															

P455	1	2	3	4	5	6	7	P456	1	2	3	4	5	6	P604	1	2
P455	3.2	5.1	5.1	5.1	5.1	5.1	5.1	P456	3.2	5.1	5.1	5.1	5.1	5.1	P604	5.1	0

ENJ-004

IC701	1	2	3	4	5	6	7	8	IC702	1	2	3	4	5	6	7	8
IC701	1.1	0.7	2.9	9.6	0	2.8	0.7	1.1	IC702	1.1	0.7	4.3	0.2	0	2.8	0.7	1.1

Q701	Q702	Q751	Q752	Q753	Q754	Q803	Q804
Q701	Q702	Q751	Q752	Q753	Q754	Q803	Q804
G	S	D	G	S	D	G	S
3.5	2.9	2.9	3.4	2.8	2.8	0	4.1
Q805	Q806	Q807	Q808	Q809	Q810	Q811	Q812
B	C	E	B	C	E	B	C
0.6	0	0	0.6	0	0	1.3	1.1

ENJ-011

IC901	1	2	3	4	5	6	7	8	IC902	1	2	3	4	5	6	7	8
IC901	6.4	6.2	6.0	0	6.0	6.2	6.4	12.1	IC902	6.4	6.1	6.4	6.1	6.1	0	0	0
IC903	1	2	3	4	5	6	7	8	IC904	1	2	3	4	5	6	7	8
IC903	6.1	6.1	6.1	6.2	6.2	6.2	6.2	6.2	IC904	6.1	6.1	6.1	6.2	6.2	6.2	6.2	6.2
IC904	6.1	6.1	6.1	6.2	6.2	6.2	6.2	6.2	IC904	6.1	6.1	6.1	6.2	6.2	6.2	6.2	6.2

Q901	Q902	Q903	Q904	Q905	Q906	Q907	Q908
Q901	Q902	Q903	Q904	Q905	Q906	Q907	Q908
B	C	E	B	C	E	B	C
0.6	0	0	0.6	0	0	0.6	0
Q909	Q910	Q911					
B	C	E	B	C	E	B	C
0	0	0	0	0	0	0.6	0

ENC-031-1, ENC-031-3, ENC-031-4

IC451	1	2	3	4	5	6	7	8	IC452	1	2	3	4	5	6	7	8
IC451	0	0	0	0	9.8	0.1	0.1	9	IC452	0	0	0	0	0	5.7	0	0
IC453	1	2	3	4	5	6	7	8	IC454	1	2	3	4	5	6	7	8
IC453	0	0	0	0	9.8	0.2	0.2	9	IC454	0	0	0	0	0	5.7	0	0

(No. 2961)

(No. 2961)

CAPACITORS

△	ITEM	PART NUMBER	DESCRIPTION				AREA
	C105	QCS21HJ-2R0	2.0PF	50V	CERAMIC		E
	C105	QCS21HJ-2R0	2.0PF	50V	CERAMIC		G
	C106	QCS21HJ-151	150PF	50V	CERAMIC		
	C107	QCF21HP-103	0.01MF	50V	CERAMIC		
	C108	QCF21HP-103	0.01MF	50V	CERAMIC		
	C109	QCF21HP-103	0.01MF	50V	CERAMIC		
	C110	QCT26CH-2R0	2.0PF	50V	CERAMIC		
	C111	QCT26TH-7R0	7.0PF	50V	CERAMIC		
	C112	QCT26CH-7R0	7.0PF	50V	CERAMIC		
	C113	QCT26CH-220	22PF	50V	CERAMIC		
	C114	QCF21HP-103	0.01MF	50V	CERAMIC		
	C115	QCT26CH-100	10PF	50V	CERAMIC		
	C116	QCS21HJ-2R0	2.0PF	50V	CERAMIC		C
	C116	QCS21HJ-2R0	2.0PF	50V	CERAMIC		D
	C116	QCS21HJ-2R0	2.0PF	50V	CERAMIC		E
	C116	QCS21HJ-2R0	2.0PF	50V	CERAMIC		G
	C118	QCF21HP-223	0.022MF	50V	CERAMIC		C
	C118	QCF21HP-223	0.022MF	50V	CERAMIC		D
	C118	QCF21HP-223	0.022MF	50V	CERAMIC		E
	C118	QCF21HP-223	0.022MF	50V	CERAMIC		G
	C119	QCT26CH-3R0	3.0PF	50V	CERAMIC		F
	C121	QCS21HJ-4R0	4.0PF	50V	CERAMIC		F
	C123	QCF21HP-223	0.022MF	50V	CERAMIC		
	C124	QCF21HP-223	0.022MF	50V	CERAMIC		
	C125	QCF21HP-223	0.022MF	50V	CERAMIC		
	C127	QCS21HJ-220	22PF	50V	CERAMIC		
	C128	QETB1EM-226	22MF	25V	ELECTRO		
	C130	QCS21HJ-101	100PF	50V	CERAMIC		F
	C131	QCF21HP-223	0.022MF	50V	CERAMIC		
	C132	QCF21HP-223	0.022MF	50V	CERAMIC		
	C133	QCF21HP-223	0.022MF	50V	CERAMIC		
	C134	QCF21HP-223	0.022MF	50V	CERAMIC		
	C135	QCC21EM-223	0.022MF	25V	CERAMIC		
	C136	QCF21HP-223	0.022MF	50V	CERAMIC		
	C139	QETB1EM-105	1MF	50V	ELECTRO		
	C140	QCS21HJ-101	100PF	50V	CERAMIC		E
	C140	QCS21HJ-101	100PF	50V	CERAMIC		F
	C140	QCS21HJ-221	220PF	50V	CERAMIC		C
	C140	QCS21HJ-221	220PF	50V	CERAMIC		D
	C140	QCS21HJ-221	220PF	50V	CERAMIC		G
	C141	QCF21HP-223	0.022MF	50V	CERAMIC		
	C142	QETB1EM-106	10MF	25V	ELECTRO		
	C144	QFN81HK-332	3300PF	50V	MYLAR		
	C145	QETB1EM-225	2.2MF	50V	ELECTRO		
	C146	QETB1EM-475	4.7MF	50V	ELECTRO		
	C147	QCF21HP-223	0.022MF	50V	CERAMIC		
	C148	QETB1EM-106	10MF	25V	ELECTRO		
	C149	QCF21HP-223	0.022MF	50V	CERAMIC		
	C150	QCY21HK-102	1000PF	50V	CERAMIC		
	C151	QCS21HJ-101	100PF	50V	CERAMIC		
	C152	QCF21HP-103	0.01MF	50V	CERAMIC		
	C153	QCS21HJ-101	100PF	50V	CERAMIC		
	C154	QCS21HJ-470	47PF	50V	CERAMIC		
	C155	QCF21HP-223	0.022MF	50V	CERAMIC		
	C156	QETB1EM-475	4.7MF	50V	ELECTRO		
	C171	QFN81HK-183	0.018MF	50V	MYLAR		E
	C171	QFN81HK-183	0.018MF	50V	MYLAR		F
	C171	QFN81HK-333	0.033MF	50V	MYLAR		C
	C171	QFN81HK-333	0.033MF	50V	MYLAR		D
	C171	QFN81HK-333	0.033MF	50V	MYLAR		G
	C172	QETB1EM-106	10MF	25V	ELECTRO		
	C173	QFN81HK-473	0.047MF	50V	MYLAR		
	C174	QETB1EM-106	10MF	25V	ELECTRO		
	C175	QCY21HK-102	1000PF	50V	CERAMIC		C
	C175	QCY21HK-331	330PF	50V	CERAMIC		E

CAPACITORS

△	ITEM	PART NUMBER	DESCRIPTION				AREA
	C175	QCY21HK-331	330PF	50V	CERAMIC		F
	C175	QCY21HK-681	680PF	50V	CERAMIC		D
	C175	QCY21HK-681	680PF	50V	CERAMIC		G
	C176	QCY21HK-102	1000PF	50V	CERAMIC		C
	C176	QCY21HK-331	330PF	50V	CERAMIC		E
	C176	QCY21HK-331	330PF	50V	CERAMIC		F
	C176	QCY21HK-681	680PF	50V	CERAMIC		D
	C176	QCY21HK-681	680PF	50V	CERAMIC		G
	C177	QETB1EM-225	2.2MF	50V	ELECTRO		
	C178	QETB1EM-225	2.2MF	50V	ELECTRO		
	C179	QETB1EM-225	2.2MF	50V	ELECTRO		
	C180	QETB1EM-105	1MF	50V	ELECTRO		
	C181	QETB1EM-105	1MF	50V	ELECTRO		
	C182	QETB1EM-474	0.47MF	50V	ELECTRO		
	C183	QETB1EM-225	2.2MF	50V	ELECTRO		
	C185	QCY21HK-102	1000PF	50V	CERAMIC		
	C187	QCS21HJ-331	330PF	50V	CERAMIC		F
	C188	QCS21HJ-331	330PF	50V	CERAMIC		F
	C202	QCC21EM-223	0.022MF	25V	CERAMIC		
	C203	QCS21HJ-561	560PF	50V	CERAMIC		
	C205	QCF21HP-223	0.022MF	50V	CERAMIC		
	C206	QCT26CH-100	10PF	50V	CERAMIC		
	C207	QCT26CH-221	220PF	50V	CERAMIC		
	C208	QCT26CH-271	270PF	50V	CERAMIC		
	C209	QCF21HP-223	0.022MF	50V	CERAMIC		
	C210	QETB1EM-106	10MF	25V	ELECTRO		
	C211	QETB1EM-106	10MF	25V	ELECTRO		
	C212	QCF21HP-103	0.01MF	50V	CERAMIC		
	C213	QCT26CH-100	10PF	50V	CERAMIC		
	C221	QCS21HJ-330	33PF	50V	CERAMIC		E
	C221	QCS21HJ-330	33PF	50V	CERAMIC		F
	C222	QCC21EM-473	0.047MF	25V	CERAMIC		G
	C222	QCC21EM-473	0.047MF	25V	CERAMIC		E
	C222	QCC21EM-473	0.047MF	25V	CERAMIC		F
	C222	QCC21EM-473	0.047MF	25V	CERAMIC		G
	C223	QCY21HK-272	2700PF	50V	CERAMIC		E
	C223	QCY21HK-272	2700PF	50V	CERAMIC		F
	C223	QCY21HK-272	2700PF	50V	CERAMIC		G
	C225	QCT26CH-680	68PF	50V	CERAMIC		E
	C225	QCT26CH-680	68PF	50V	CERAMIC		F
	C225	QCT26CH-680	68PF	50V	CERAMIC		
	C226	QCT26CH-151	150PF	50V	CERAMIC		H
	C226	QCT26CH-151	150PF	50V	CERAMIC		E
	C226	QCT26CH-151	150PF	50V	CERAMIC		F
	C227	QCT26CH-150	15PF	50V	CERAMIC		G
	C227	QCT26CH-150	15PF	50V	CERAMIC		F
	C227	QCT26CH-150	15PF	50V	CERAMIC		G
	C228	QETB1EM-106	10MF	25V	ELECTRO		E
	C228	QETB1EM-106	10MF	25V	ELECTRO		F
	C228	QETB1EM-106	10MF	25V	ELECTRO		G
	C229	QCT26CH-7R0	7.0PF	50V	CERAMIC		H
	C229	QCT26CH-7R0	7.0PF	50V	CERAMIC		F
	C229	QCT26CH-7R0	7.0PF	50V	CERAMIC		G
	C241	QCS21HJ-180	18PF	50V	CERAMIC		
	C242	QCS21HJ-180	18PF	50V	CERAMIC		
	C243	QEN51HM-474	0.47MF	50V	NON POLE		
	C244	QCY21HK-102	1000PF	50V	CERAMIC		
	C247	QCC21EM-473	0.047MF	25V	CERAMIC		
	C249	QCS21HJ-101	100PF	50V	CERAMIC		F
	C253	QCS21HJ-101	100PF	50V	CERAMIC		F
	C254	QFV81HJ-824	0.82MF	50V	T. FILM		F
	C261	QETB1EM-105	1MF	50V	ELECTRO		
	C262	QETB1EM-475	4.7MF	50V	ELECTRO		
	C263	QCF21HP-103	0.01MF	50V	CERAMIC		
	C264	QETB1EM-227	220MF	10V	ELECTRO		

CAPACITORS

ITEM	PART NUMBER	DESCRIPTION			AREA
C265	EEZ0502-479	47MF		ELECTRO	
C266	QCS21HJ-331	330PF	50V	CERAMIC	
C267	QCS21HJ-331	330PF	50V	CERAMIC	
C271	QFN81HK-104	0.1MF	50V	MYLAR	
C274	QCY21HK-332	3300PF	50V	CERAMIC	
C299	QFN81HK-104	0.1MF	50V	MYLAR	
TC101	ENZ1003-003			TRIMMER	
TC102	ENZ1003-003			TRIMMER	
TC201	ENZ1003-006			TRIMMER	
TC221	ENZ1003-006			TRIMMER	
TC221	ENZ1003-006			TRIMMER	F
TC221	ENZ1003-006			TRIMMER	G

RESISTORS

ITEM	PART NUMBER	DESCRIPTION			AREA
R101	QRD161J-473	47K	1/6W	CARBON	
R102	QRD161J-330	33	1/6W	CARBON	
R103	QRD161J-473	47K	1/6W	CARBON	
R104	QRD161J-223	22K	1/6W	CARBON	
R105	QRD161J-332	3.3K	1/6W	CARBON	
R106	QRD161J-102	1K	1/6W	CARBON	
R107	QRD161J-102	1K	1/6W	CARBON	
R108	QRD161J-330	33	1/6W	CARBON	
R109	QRD161J-331	330	1/6W	CARBON	
R110	QRD161J-224	220K	1/6W	CARBON	
R111	QRD161J-472	4.7K	1/6W	CARBON	
R112	QRD161J-103	10K	1/6W	CARBON	
R113	QRD161J-682	6.8K	1/6W	CARBON	
R114	QRD161J-222	2.2K	1/6W	CARBON	
R115	QRD161J-561	560	1/6W	CARBON	
R116	QRD161J-221	220	1/6W	CARBON	
R117	QRD161J-224	220K	1/6W	CARBON	F
R118	QRD161J-331	330	1/6W	CARBON	F
R119	QRD161J-331	330	1/6W	CARBON	F
R131	QRD161J-332	3.3K	1/6W	CARBON	
R132	QRD161J-221	220	1/6W	CARBON	
R133	QRD161J-391	390	1/6W	CARBON	
R134	QRD161J-272	2.7K	1/6W	CARBON	
R135	QRD161J-681	680	1/6W	CARBON	
R136	QRD161J-102	1K	1/6W	CARBON	
R137	QRD161J-332	3.3K	1/6W	CARBON	
R138	QRD161J-221	220	1/6W	CARBON	
R139	QRD161J-333	33K	1/6W	CARBON	C
R139	QRD161J-333	33K	1/6W	CARBON	D
R139	QRD161J-333	33K	1/6W	CARBON	E
R139	QRD161J-333	33K	1/6W	CARBON	
R139	QRD161J-333	33K	1/6W	CARBON	F
R139	QRD161J-333	33K	1/6W	CARBON	G
R140	QRD161J-561	560	1/6W	CARBON	
R142	QRD161J-103	10K	1/6W	CARBON	
R143	QRD161J-273	27K	1/6W	CARBON	E
R143	QRD161J-273	27K	1/6W	CARBON	F
R143	QRD161J-682	6.8K	1/6W	CARBON	C
R143	QRD161J-682	6.8K	1/6W	CARBON	D
R143	QRD161J-682	6.8K	1/6W	CARBON	G
R144	QRD161J-103	10K	1/6W	CARBON	
R145	QRD161J-103	10K	1/6W	CARBON	
R147	QRD161J-391	390	1/6W	CARBON	
R150	QRD161J-152	1.5K	1/6W	CARBON	
R151	QRD161J-154	150K	1/6W	CARBON	

RESISTORS

ITEM	PART NUMBER	DESCRIPTION			AREA
R152	QRD161J-562	5.6K	1/6W	CARBON	
R153	QRD161J-332	3.3K	1/6W	CARBON	
R154	QRD161J-561	560	1/6W	CARBON	
R155	QRD161J-221	220	1/6W	CARBON	
R156	QRD161J-102	1K	1/6W	CARBON	
R157	QRD161J-822	8.2K	1/6W	CARBON	
R171	QRD161J-393	39K	1/6W	CARBON	C
R171	QRD161J-393	39K	1/6W	CARBON	D
R171	QRD161J-393	39K	1/6W	CARBON	E
R171	QRD161J-393	39K	1/6W	CARBON	G
R171	QRD161J-563	56K	1/6W	CARBON	F
R172	QRD161J-154	150K	1/6W	CARBON	E
R172	QRD161J-154	150K	1/6W	CARBON	F
R172	QRD161J-753	75K	1/6W	CARBON	C
R172	QRD161J-753	75K	1/6W	CARBON	D
R172	QRD161J-753	75K	1/6W	CARBON	
R173	QRD161J-154	150K	1/6W	CARBON	G
R173	QRD161J-154	150K	1/6W	CARBON	Z
R173	QRD161J-753	75K	1/6W	CARBON	F
R173	QRD161J-753	75K	1/6W	CARBON	C
R173	QRD161J-753	75K	1/6W	CARBON	D
R173	QRD161J-753	75K	1/6W	CARBON	
R174	QRD161J-332	3.3K	1/6W	CARBON	
R175	QRD161J-332	3.3K	1/6W	CARBON	
R176	QRD161J-124	120K	1/6W	CARBON	C
R176	QRD161J-124	120K	1/6W	CARBON	D
R176	QRD161J-124	120K	1/6W	CARBON	
R176	QRD161J-224	220K	1/6W	CARBON	G
R176	QRD161J-224	220K	1/6W	CARBON	E
R176	QRD161J-224	220K	1/6W	CARBON	F
R177	QRD161J-124	120K	1/6W	CARBON	C
R177	QRD161J-124	120K	1/6W	CARBON	D
R177	QRD161J-124	120K	1/6W	CARBON	
R177	QRD161J-224	220K	1/6W	CARBON	G
R177	QRD161J-224	220K	1/6W	CARBON	E
R177	QRD161J-224	220K	1/6W	CARBON	F
R178	QRD161J-472	4.7K	1/6W	CARBON	E
R178	QRD161J-472	4.7K	1/6W	CARBON	F
R178	QRD161J-682	6.8K	1/6W	CARBON	C
R178	QRD161J-682	6.8K	1/6W	CARBON	D
R178	QRD161J-682	6.8K	1/6W	CARBON	G
R179	QRD161J-472	4.7K	1/6W	CARBON	E
R179	QRD161J-472	4.7K	1/6W	CARBON	F
R179	QRD161J-682	6.8K	1/6W	CARBON	C
R179	QRD161J-682	6.8K	1/6W	CARBON	D
R179	QRD161J-682	6.8K	1/6W	CARBON	G
R180	QRD161J-472	4.7K	1/6W	CARBON	
R181	QRD161J-472	4.7K	1/6W	CARBON	
R182	QRD161J-103	10K	1/6W	CARBON	
R183	QRD161J-473	47K	1/6W	CARBON	
R184	QRD161J-473	47K	1/6W	CARBON	
R185	QRD161J-562	5.6K	1/6W	CARBON	
R186	QRD161J-103	10K	1/6W	CARBON	
R187	QRD161J-562	5.6K	1/6W	CARBON	
R201	QRD161J-103	10K	1/6W	CARBON	
R202	QRD161J-473	47K	1/6W	CARBON	
R203	QRD161J-471	470	1/6W	CARBON	
R205	QRD161J-103	10K	1/6W	CARBON	E
R205	QRD161J-103	10K	1/6W	CARBON	F
R205	QRD161J-103	10K	1/6W	CARBON	G
R206	QRD161J-103	10K	1/6W	CARBON	E
R206	QRD161J-103	10K	1/6W	CARBON	F
R206	QRD161J-103	10K	1/6W	CARBON	G
R207	QRD161J-330	33	1/6W	CARBON	
R221	QRD161J-103	10K	1/6W	CARBON	E
R221	QRD161J-103	10K	1/6W	CARBON	F
R221	QRD161J-103	10K	1/6W	CARBON	G
R222	QRD161J-473	47K	1/6W	CARBON	E

RESISTORS

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	R222	QRD161J-473	47K	1/6W	CARBON	F
	R222	QRD161J-473	47K	1/6W	CARBON	E
	R223	QRD161J-471	470	1/6W	CARBON	G
	R223	QRD161J-471	470	1/6W	CARBON	F
	R223	QRD161J-471	470	1/6W	CARBON	G
	R225	QRD161J-103	10K	1/6W	CARBON	E
	R225	QRD161J-103	10K	1/6W	CARBON	F
	R225	QRD161J-103	10K	1/6W	CARBON	G
	R226	QRD161J-472	4.7K	1/6W	CARBON	E
	R226	QRD161J-472	4.7K	1/6W	CARBON	F
	R226	QRD161J-472	4.7K	1/6W	CARBON	G
	R241	QRD161J-473	47K	1/6W	CARBON	E
	R242	QRD161J-103	10K	1/6W	CARBON	F
	R243	QRD161J-103	10K	1/6W	CARBON	G
	R244	QRD161J-103	10K	1/6W	CARBON	E
	R244	QRD161J-103	10K	1/6W	CARBON	F
	R244	QRD161J-103	10K	1/6W	CARBON	G
	R245	QRD161J-103	10K	1/6W	CARBON	C
	R245	QRD161J-103	10K	1/6W	CARBON	D
	R245	QRD161J-222	2.2K	1/6W	CARBON	E
	R245	QRD161J-222	2.2K	1/6W	CARBON	F
	R245	QRD161J-222	2.2K	1/6W	CARBON	G
	R246	QRD161J-271	270	1/6W	CARBON	C
	R247	QRD161J-332	3.3K	1/6W	CARBON	D
	R247	QRD161J-332	3.3K	1/6W	CARBON	E
	R247	QRD161J-822	8.2K	1/6W	CARBON	F
	R247	QRD161J-822	8.2K	1/6W	CARBON	G
	R247	QRD161J-822	8.2K	1/6W	CARBON	E
	R248	QRD161J-222	2.2K	1/6W	CARBON	F
	R249	QRD161J-472	4.7K	1/6W	CARBON	G
	R252	QRD161J-222	2.2K	1/6W	CARBON	E
	R253	QRD161J-473	47K	1/6W	CARBON	F
	R254	QRD161J-473	47K	1/6W	CARBON	G
	R255	QRD161J-473	47K	1/6W	CARBON	E
	R255	QRD161J-473	47K	1/6W	CARBON	F
	R255	QRD161J-473	47K	1/6W	CARBON	G
	R261	QRD161J-473	47K	1/6W	CARBON	E
	R262	QRD161J-223	22K	1/6W	CARBON	F
	R263	QRD161J-103	10K	1/6W	CARBON	G
	R264	QRD161J-331	330	1/6W	CARBON	E
	R265	QRD161J-105	1M	1/6W	CARBON	F
	R266	QRD161J-222	2.2K	1/6W	CARBON	G
	R267	QRD161J-472	4.7K	1/6W	CARBON	E
	R268	QRD161J-472	4.7K	1/6W	CARBON	F
	R273	QRD161J-472	4.7K	1/6W	CARBON	G
	R274	QRD161J-105	1M	1/6W	CARBON	E
	R280	QRD161J-103	10K	1/6W	CARBON	F
	R281	QRD161J-103	10K	1/6W	CARBON	G
	R282	QRD161J-101	100	1/6W	CARBON	E
	R283	QRD161J-473	47K	1/6W	CARBON	F
	R284	QRD161J-223	22K	1/6W	CARBON	G

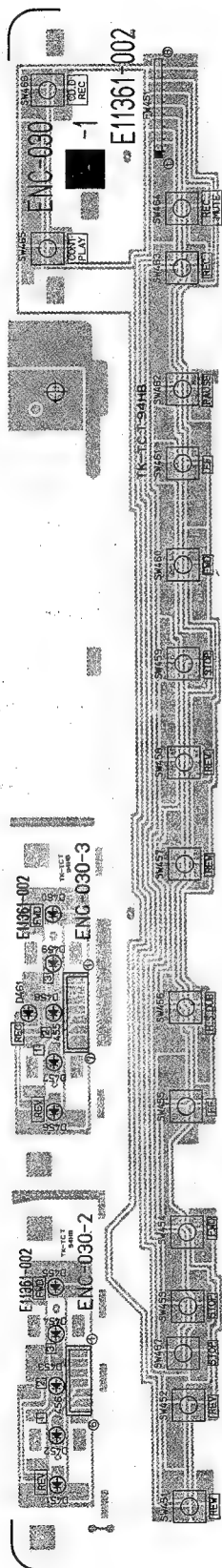
OTHERS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	CF131	ECB2118-001R	CERAMIC FILTER	E
	CF131	ECB2118-001R	CERAMIC FILTER	F
	CF131	ECB2123-001R	CERAMIC FILTER	C
	CF131	ECB2123-001R	CERAMIC FILTER	D
	CF131	ECB2123-001R	CERAMIC FILTER	G
	CF132	ECB2118-001R	CERAMIC FILTER	E
	CF132	ECB2118-001R	CERAMIC FILTER	F
	CF132	ECB2123-001R	CERAMIC FILTER	C
	CF132	ECB2123-001R	CERAMIC FILTER	D
	CF132	ECB2123-001R	CERAMIC FILTER	G

OTHERS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	J201	EMV7112-007	SOCKET	
	J202	QMV5005-003K	PLUG ASSY	
	L101	BQR2306-014	RF COIL	C
	L101	BQR2306-014	RF COIL	D
	L101	BQR2306-014	RF COIL	E
	L101	BQR2306-014	RF COIL	F
	L101	BQR2306-014	RF COIL	G
	L101	BQR2306-016	RF COIL	F
	L102	BQR2106-014	RF COIL	
	L103	BQR2406-004	RF COIL	
	L104	BQL3001-1R5KY	INDUCTOR	
	L201	BQR1111-006	RF COIL	
	L202	BQR1207-009	RF COIL	
	L221	BQR1111-005	RF COIL	E
	L221	BQR1111-005	RF COIL	F
	L221	BQR1111-005	RF COIL	G
	L222	BQR1307-002	RF COIL	E
	L222	BQR1307-002	RF COIL	F
	L222	BQR1307-002	RF COIL	G
	L241	BQL3001-471KYL	INDUCTOR	E
	L241	BQL3001-471KYL	INDUCTOR	F
	L241	BQL3001-471KYL	INDUCTOR	G
	L242	BQL3001-471KYL	INDUCTOR	
	LC201	ELU0002-025	LCD PANEL	
	LP171	BQF0101-002	FILTER	F
	LP172	BQF0102-001	FILTER	
	S101	QSS6A12-B01	SLIDE SWITCH	C
	SF101	BQF0201-006	FILTER	F
	SW261	ESP0001-007	PUSH SWITCH	
	SW262	ESP0001-007	PUSH SWITCH	
	SW263	ESP0001-007	PUSH SWITCH	
	SW264	ESP0001-007	PUSH SWITCH	
	SW265	ESP0001-007	PUSH SWITCH	
	SW266	ESP0001-007	PUSH SWITCH	
	SW267	ESP0001-007	PUSH SWITCH	
	SW268	ESP0001-007	PUSH SWITCH	
	SW269	ESP0001-007	PUSH SWITCH	
	SW270	ESP0001-007	PUSH SWITCH	
	SW271	ESP0001-007	PUSH SWITCH	
	SW272	ESP0001-007	PUSH SWITCH	
	SW273	ESP0001-007	PUSH SWITCH	
	SW274	ESP0001-007	PUSH SWITCH	
	SW275	ESP0001-007	PUSH SWITCH	
	SW276	ESP0001-007	PUSH SWITCH	
	SW277	ESP0001-007	PUSH SWITCH	
	T131	BQT2140-012	I. P. TRANSFORMER	
	T132	BQT2140-013	I. P. TRANSFORMER	
	T133	ECB1560-003	CERAMIC FILTER	
	TP101	B67764-002	TERMINAL ASSY	
	TP102	B67764-002	TERMINAL ASSY	
	TP261	QMV5005-003K	PLUG ASSY	
	XT171	ECX0000-456KR	RESONATOR	
	XT241	ECX0007-200KC	X' TAL	
	XT261	ECX0000-400KS	CERA LOCK	
		E11347-003	CIRCUIT BOARD	
		E304180-001	SHIELD CASE	
		B45524-002	FUSE CLIP	
		E70225-001	EARTH PLATE	
		E70859-001	EARTH PLATE	
		E73297-001	SHILD CASE	F
		E74033-001	SHIELD PLATE	F
		EMB01YV-401K	ANT. TERMINAL	C
		EMB01YV-401K	ANT. TERMINAL	D
		EMB01YV-401K	ANT. TERMINAL	E
		EMB01YV-401K	ANT. TERMINAL	G
		EMB01YV-402K	ANT. TERMINAL	F

■ ENC-030 A Front Switch PC Board Ass'y



DIODES

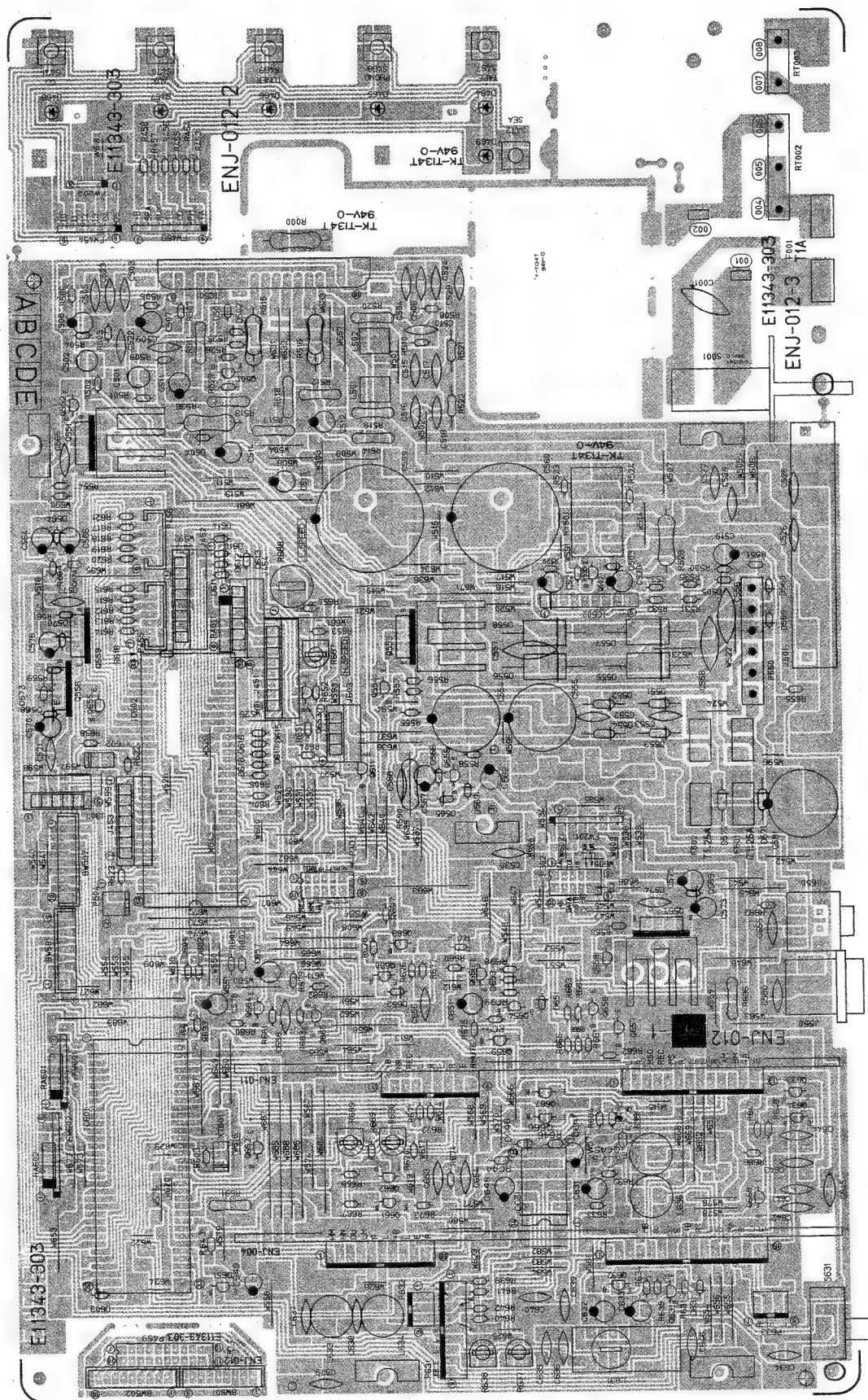
Δ	ITEM	PART NUMBER	DESCRIPTION		AREA
				MAKER	
	D451	SLV-31DC3F	L.E.D.	ROHM	
	D452	SLV-31DC3F	L.E.D.	ROHM	
	D453	SLV-31DC3F	L.E.D.	ROHM	
	D454	SLV-31DC3F	L.E.D.	ROHM	
	D455	SLV-31DC3F	L.E.D.	ROHM	
	D456	SLV-31DC3F	L.E.D.	ROHM	
	D457	SLV-31DC3F	L.E.D.	ROHM	
	D458	SLV-31DC3F	L.E.D.	ROHM	
	D459	SLV-31DC3F	L.E.D.	ROHM	
	D460	SLV-31DC3F	L.E.D.	ROHM	
	D461	SLV-31VC3F	L.E.D.	ROHM	

OTHERS

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	SW451	ESP0001-007	PUSH SWITCH	A
	SW452	ESP0001-007	PUSH SWITCH	
	SW453	ESP0001-007	PUSH SWITCH	
	SW454	ESP0001-007	PUSH SWITCH	
	SW455	ESP0001-007	PUSH SWITCH	
	SW456	ESP0001-007	PUSH SWITCH	
	SW457	ESP0001-007	PUSH SWITCH	
	SW458	ESP0001-007	PUSH SWITCH	
	SW459	ESP0001-007	PUSH SWITCH	
	SW460	ESP0001-007	PUSH SWITCH	
	SW461	ESP0001-007	PUSH SWITCH	
	SW462	ESP0001-007	PUSH SWITCH	
	SW463	ESP0001-007	PUSH SWITCH	
	SW464	ESP0001-007	PUSH SWITCH	
	SW465	ESP0001-007	PUSH SWITCH	
	SW466	ESP0001-007	PUSH SWITCH	
	E11361-002		CIRCUIT BOARD	
	E304362-002		LED HOLDER	

■ ENJ-012 □ Audio PC Board Ass'y

Note: ENJ-012□ Varies according to the area employed. See note (1) when placing an order.



Note (1)

PC Board Ass'y	Designated Areas
ENJ-012 M	U.S. Military Market & Other Countries
ENJ-012 N BS	U.K.
ENJ-012 O	Europe, Australia
ENJ-012 P	West Germany

TRANSISTORS

ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER	
Q501	2SC2240 (GR)	SILICON	TOSHIBA	
Q502	2SA970 (GR)	SILICON	TOSHIBA	
Q551	2SD1913 (R, S)	SILICON	SANYO	
Q552	2SC1685 (Q, R)	SILICON	MATSUSHITA	
Q553	2SB1133 (R, S)	SILICON	SANYO	
Q554	2SA564A (Q, R)	SILICON	MATSUSHITA	
Q555	2SC1685 (Q, R)	SILICON	MATSUSHITA	
Q556	2SD1913 (R, S)	SILICON	SANYO	
Q557	2SB1274 (R, S)	SILICON	SANYO	
Q558	2SA564A (Q, R)	SILICON	MATSUSHITA	
Q559	2SD1913 (R, S)	SILICON	SANYO	
Q611	2SC3377 (Q, R)	SILICON	ROHM	
Q631	2SC1741A (Q, R)	SILICON	ROHM	
Q632	2SC1741A (Q, R)	SILICON	ROHM	
Q633	2SC1685 (Q, R)	SILICON	MATSUSHITA	
Q634	2SC1685 (Q, R)	SILICON	MATSUSHITA	
Q645	DTC144EN	SILICON	ROHM	
Q651	DTC144EN	SILICON	ROHM	
Q652	DTC144EN	SILICON	ROHM	
Q653	2SA564A (Q, R)	SILICON	MATSUSHITA	
Q654	2SC1685 (Q, R)	SILICON	MATSUSHITA	
Q655	DTC144EN	SILICON	ROHM	
Q656	DTA144EN	SILICON	ROHM	
Q657	2SD1302 (S, T)	SILICON	MATSUSHITA	
Q658	2SD1302 (S, T)	SILICON	MATSUSHITA	
Q659	2SA564A (Q, R)	SILICON	MATSUSHITA	
Q660	DTA144EN	SILICON	ROHM	
Q661	2SD1302 (S, T)	SILICON	MATSUSHITA	
Q662	2SD1302 (S, T)	SILICON	MATSUSHITA	
Q663	2SC1685 (Q, R)	SILICON	MATSUSHITA	
Q664	2SC1685 (Q, R)	SILICON	MATSUSHITA	
Q665	2SC1685 (Q, R)	SILICON	MATSUSHITA	
Q666	DTC144EN	SILICON	ROHM	
Q667	DTC144EN	SILICON	ROHM	
Q668	DTC144EN	SILICON	ROHM	

I.C.S

ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER	
IC501	STK4191MK5	I.C.	SANYO	
IC502	TAT7317P	I.C.	TOSHIBA	
IC601	HD614022SF37	I.C.	HITACHI	
IC602	UPD75104CW-022	I.C.	NEC	
IC631	UPC1290C	I.C.	NEC	

DIODES

ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER	
D464	SLH-34DC3F	L.E.D.	ROHM	
D465	SLH-34DC3F	L.E.D.	ROHM	
D466	SLH-34DC3F	L.E.D.	ROHM	
D467	SLH-34DC3F	L.E.D.	ROHM	
D468	SLH-34DC3F	L.E.D.	ROHM	
D469	SLH-34VC3F	L.E.D.	ROHM	
D501	1SS133	SILICON	ROHM	
D502	1SS133	SILICON	ROHM	
D503	1SS133	SILICON	ROHM	
D504	MTZ12JC	ZENER	ROHM	
D505	MTZ5.6C	ZENER	ROHM	
D551	11E2FA-9	SILICON	NIHON-INTER	
D552	11E2FA-9	SILICON	NIHON-INTER	
D553	11E2FA-9	SILICON	NIHON-INTER	
D554	11E2FA-9	SILICON	NIHON-INTER	
D555	S3V20F	SILICON	SHINDENGEN	
D556	S3V20F	SILICON	SHINDENGEN	
D557	S3V20F	SILICON	SHINDENGEN	
D558	S3V20F	SILICON	SHINDENGEN	
D559	1SS133	SILICON	ROHM	M
D559	1SS147	SILICON	ROHM	NBS
D559	1SS147	SILICON	ROHM	O
D559	1SS147	SILICON	ROHM	P
D560	1SS133	SILICON	ROHM	M
D560	1SS147	SILICON	ROHM	NBS
D560	1SS147	SILICON	ROHM	O
D560	1SS147	SILICON	ROHM	P
D564	MTZ11C	ZENER	ROHM	
D565	UTZ12JC	SILICON	ROHM	
D566	1SS133	SILICON	ROHM	
D567	1SS133	SILICON	ROHM	
D568	MTZ6.2C	ZENER	ROHM	
D569	MTZ12JC	ZENER	ROHM	
D570	MTZ5.6C	ZENER	ROHM	
D571	11E2FA-9	SILICON	NIHON-INTER	
D572	11E2FA-9	SILICON	NIHON-INTER	
D573	MTZ6.8JC	ZENER	ROHM	
D574	MTZ6.8JC	ZENER	ROHM	
D575	RD6.2EB3	ZENER	NEC	
D576	RD6.2EB3	ZENER	NEC	
D601	1SS133	SILICON	ROHM	
D602	1SS133	SILICON	ROHM	
D603	1SS133	SILICON	ROHM	
D611	1SS133	SILICON	ROHM	
D612	1SS133	SILICON	ROHM	
D615	1SS133	SILICON	ROHM	
D616	1SS133	SILICON	ROHM	
D617	1SS133	SILICON	ROHM	
D618	1SS133	SILICON	ROHM	
D631	1SS133	SILICON	ROHM	
D646	1SS133	SILICON	ROHM	
D651	1SS133	SILICON	ROHM	
D652	1SS133	SILICON	ROHM	
D653	1SS133	SILICON	ROHM	

CAPACITORS

△	ITEM	PART NUMBER	DESCRIPTION				AREA
	C001	QCZ9019-472	4700PF	400V	CERAMIC		M
	C001	QCZ9019-472	4700PF	400V	CERAMIC		O
	C001	QCZ9019-472	4700PF	400V	CERAMIC		P
	C001	QCZ9019-472BS	4700PF	400V	CERAMIC		NBS
	C501	QFV81HJ-104	0.1MF	50V	T.FILM		
	C502	QFV81HJ-104	0.1MF	50V	T.FILM		
	C503	QCS21HJ-101	100PF	50V	CERAMIC		M
	C503	QCS21HJ-101	100PF	50V	CERAMIC		NBS
	C503	QCS21HJ-101	100PF	50V	CERAMIC		O
	C503	QCS21HJ-221	220PF	50V	CERAMIC		P
	C504	QCS21HJ-101	100PF	50V	CERAMIC		M
	C504	QCS21HJ-101	100PF	50V	CERAMIC		NBS
	C504	QCS21HJ-101	100PF	50V	CERAMIC		O
	C504	QCS21HJ-221	220PF	50V	CERAMIC		P
	C505	QCS21HJ-151	150PF	50V	CERAMIC		
	C506	QCS21HJ-151	150PF	50V	CERAMIC		
	C507	QEHCIAM-476	47MF	10V	ELECTRO		
	C508	QEHCIAM-476	47MF	10V	ELECTRO		
	C509	QCS21HJ-100	10PF	50V	CERAMIC		
	C510	QCS21HJ-100	10PF	50V	CERAMIC		
	C511	QETB1HM-226	22MF	50V	ELECTRO		
	C512	QETB1HM-226	22MF	50V	ELECTRO		
	C513	QETB1HM-107	100MF	50V	ELECTRO		
	C514	QETB1HM-107	100MF	50V	ELECTRO		
	C515	QFV81HJ-104	0.1MF	50V	T.FILM		
	C516	QFV81HJ-104	0.1MF	50V	T.FILM		
	C517	QFV81HJ-104	0.1MF	50V	T.FILM		
	C518	QFV81HJ-104	0.1MF	50V	T.FILM		
	C519	QETB1HM-105	1MF	50V	ELECTRO		
	C520	QETB1CM-226	22MF	16V	ELECTRO		
	C521	QETB1AM-476	47MF	10V	ELECTRO		
	C522	QCS21HJ-101	100PF	50V	CERAMIC		
	C523	QCS21HJ-220	22PF	50V	CERAMIC		P
	C524	QCS21HJ-220	22PF	50V	CERAMIC		P
	C525	QCS21HJ-330	33PF	50V	CERAMIC		P
	C526	QCS21HJ-330	33PF	50V	CERAMIC		P
	C530	QCF21HP-103	0.01MF	50V	CERAMIC		
	C531	QCY21HK-102	1000PF	50V	CERAMIC		P
	C532	QCY21HK-102	1000PF	50V	CERAMIC		P
	C533	QCS21HJ-331	330PF	50V	CERAMIC		P
	C534	QCS21HJ-331	330PF	50V	CERAMIC		P
	C535	QCF21HP-223	0.022MF	50V	CERAMIC		P
	C536	QCF21HP-223	0.022MF	50V	CERAMIC		P
	C537	QCS21HJ-221	220PF	50V	CERAMIC		P
	C552	QCF21HP-103	0.01MF	50V	CERAMIC		
	C553	QCF21HP-103	0.01MF	50V	CERAMIC		
	C554	QETB1EM-228	2200MF	25V	ELECTRO		
	C555	QETB1EM-338	3300MF	25V	ELECTRO		
	C556	QCE22HP-103	0.01MF	500V	CERAMIC		
	C557	QCE22HP-103	0.01MF	500V	CERAMIC		
	C558	QCE22HP-103	0.01MF	500V	CERAMIC		
	C559	EEW5301-688M			ELECTRO		
	C560	EEW5301-688M			ELECTRO		
	C564	QETB1CM-226	22MF	16V	ELECTRO		
	C565	QCF21HP-103	0.01MF	50V	CERAMIC		
	C566	QETB1CM-226	22MF	16V	ELECTRO		
	C567	QETB1EM-106	10MF	25V	ELECTRO		
	C568	QCF21HP-103	0.01MF	50V	CERAMIC		
	C570	QETB1AM-476	47MF	10V	ELECTRO		
	C571	QCF21HP-103	0.01MF	50V	CERAMIC		
	C573	QETB1CM-227	220MF	16V	ELECTRO		
	C574	QCF21HP-103	0.01MF	50V	CERAMIC		
	C575	QETB1CM-226	22MF	16V	ELECTRO		
	C576	QETB1AM-476	47MF	10V	ELECTRO		
	C577	QCF21HP-103	0.01MF	50V	CERAMIC		

CAPACITORS

△	ITEM	PART NUMBER	DESCRIPTION				AREA
	C578	QETB1AM-476	47MF	10V	ELECTRO		
	C579	QCF21HP-103	0.01MF	50V	CERAMIC		P
	C580	QCF21HP-103	0.01MF	50V	CERAMIC		P
	C581	QETB1EM-338	3300MF	25V	ELECTRO		
	C582	QETB1EM-106	10MF	25V	ELECTRO		
	C631	QETB1HM-105	1MF	50V	ELECTRO		
	C632	QETB1HM-105	1MF	50V	ELECTRO		
	C633	QETB1EM-106	10MF	25V	ELECTRO		
	C634	QCS21HJ-471	470PF	50V	CERAMIC		
	C635	QCS21HJ-101	100PF	50V	CERAMIC		
	C636	QCS21HJ-101	100PF	50V	CERAMIC		
	C637	QCS21HJ-101	100PF	50V	CERAMIC		
	C638	QCS21HJ-101	100PF	50V	CERAMIC		
	C639	QCY21HK-102	1000PF	50V	CERAMIC		
	C640	QCY21HK-102	1000PF	50V	CERAMIC		
	C641	QCS21HJ-470	47PF	50V	CERAMIC		
	C642	QCS21HJ-470	47PF	50V	CERAMIC		
	C643	QCS21HJ-331	330PF	50V	CERAMIC		
	C644	QCS21HJ-331	330PF	50V	CERAMIC		
	C645	QCF21HP-103	0.01MF	50V	CERAMIC		P
	C646	QCS21HJ-101	100PF	50V	CERAMIC		P
	C647	QETB1EM-106	10MF	25V	ELECTRO		
	C648	QETB1EM-106	10MF	25V	ELECTRO		
	C649	QEK61EM-106	10MF	25V	ELECTRO		
	C651	QETB1HM-225	2.2MF	50V	ELECTRO		
	C653	QCY21HK-122	1200PF	50V	CERAMIC		
	C654	QCY21HK-122	1200PF	50V	CERAMIC		
	C655	QCS21HJ-101	100PF	50V	CERAMIC		
	C656	QCF21HP-102	1000PF	50V	CERAMIC		
	C657	QETB1HM-105	1MF	50V	ELECTRO		
	C658	QCF21HP-223	0.022MF	50V	CERAMIC		

RESISTORS

△	ITEM	PART NUMBER	DESCRIPTION				AREA
	R000	QRG022J-122A	1.2K	2W	O.M.FILM		
	R001	QRC128K-275EM	2.7M	1/2W	COMPOSI		L
	R453	QRD161J-271	270	1/6W	CARBON		
	R454	QRD161J-271	270	1/6W	CARBON		
	R455	QRD161J-271	270	1/6W	CARBON		
	R456	QRD161J-271	270	1/6W	CARBON		
	R457	QRD161J-271	270	1/6W	CARBON		
	R458	QRD161J-271	270	1/6W	CARBON		
	R501	QRD161J-102	1K	1/6W	CARBON		
	R502	QRD161J-102	1K	1/6W	CARBON		
	R503	QRD161J-104	100K	1/6W	CARBON		
	R504	QRD161J-104	100K	1/6W	CARBON		
	R505	QRD161J-431	430	1/6W	CARBON		
	R506	QRD161J-431	430	1/6W	CARBON		
	R507	QRD161J-471	470	1/6W	CARBON		
	R508	QRD161J-471	470	1/6W	CARBON		
	R509	QRD161J-104	100K	1/6W	CARBON		
	R510	QRD161J-104	100K	1/6W	CARBON		
	R511	QRD14CJ-332S	3.3K	1/4W	UNF. CARBON		
	R512	QRD14CJ-332S	3.3K	1/4W	UNF. CARBON		
	R513	QRD14CJ-392S	3.9K	1/4W	UNF. CARBON		
	R514	QRD14CJ-392S	3.9K	1/4W	UNF. CARBON		
	R515	QRX022J-R22AM	0.22	2W	M.FILM		
	R516	QRX022J-R22AM	0.22	2W	M.FILM		
	R517	QRZ0077-101	100	1/4W	FUSIBLE		M
	R517	QRZ0077-101	100	1/4W	FUSIBLE		NBS
	R517	QRZ0077-101	100	1/4W	FUSIBLE		O
	R517	QRZ0077-101	100	1/4W	FUSIBLE		P
	R518	QRZ0077-100	10	1/4W	FUSIBLE		M
	R518	QRZ0077-100	10	1/4W	FUSIBLE		NBS

RESISTORS

ITEM	PART NUMBER	DESCRIPTION			AREA
△ R518	QRZ0077-100	10	1/4W	FUSIBLE	O P
△ R519	QRZ0077-100	10	1/4W	FUSIBLE	
△ R519	QRD14CJ-100S	10	1/4W	UNF. CARBON	
△ R520	QRD14CJ-100S	10	1/4W	UNF. CARBON	
△ R521	QRD145J-100S	10	1/4W	UNF. CARBON	
△ R522	QRD145J-100S	10	1/4W	UNF. CARBON	
R523	QRD161J-823	82K	1/6W	CARBON	
R524	QRD161J-104	100K	1/6W	CARBON	
R525	QRD161J-223	22K	1/6W	CARBON	
R526	QRD161J-223	22K	1/6W	CARBON	
△ R527	QRD161J-103	10K	1/6W	CARBON	
R528	QRG022J-681AM	680	2W	O. M. FILM	
R529	QRD161J-104	100K	1/6W	CARBON	
R530	QRD161J-103	10K	1/6W	CARBON	
R531	QRD161J-473	47K	1/6W	CARBON	
R532	QRD161J-563	56K	1/6W	CARBON	
R533	QRD161J-223	22K	1/6W	CARBON	
R534	QRD161J-394	390K	1/6W	CARBON	
R535	QRD161J-223	22K	1/6W	CARBON	
△ R536	QRG022J-222A	2.2K	2W	O. M. FILM	
R551	QRD161J-103	10K	1/6W	CARBON	
R554	QRD161J-332	3.3K	1/6W	CARBON	
R555	QRD161J-103	10K	1/6W	CARBON	
R556	QRD161J-332	3.3K	1/6W	CARBON	
R557	QRD161J-332	3.3K	1/6W	CARBON	
R558	QRD161J-472	4.7K	1/6W	CARBON	
R559	QRD161J-102	1K	1/6W	CARBON	
R560	QRD161J-332	3.3K	1/6W	CARBON	
R561	QRD161J-102	1K	1/6W	CARBON	
△ R590	QRX022J-3R3A	3.3	2W	M. FILM	
R601	QRD161J-223	22K	1/6W	CARBON	
R602	QRD161J-223	22K	1/6W	CARBON	
R603	QRD161J-105	1M	1/6W	CARBON	
R604	QRD161J-223	22K	1/6W	CARBON	
R605	QRD161J-223	22K	1/6W	CARBON	
R611	QRD161J-271	270	1/6W	CARBON	
R612	QRD161J-271	270	1/6W	CARBON	
R613	QRD161J-271	270	1/6W	CARBON	
R614	QRD161J-271	270	1/6W	CARBON	
R615	QRD161J-271	270	1/6W	CARBON	
R616	QRD161J-271	270	1/6W	CARBON	
R617	QRD161J-271	270	1/6W	CARBON	
R618	QRD161J-271	270	1/6W	CARBON	
R619	QRD161J-271	270	1/6W	CARBON	
R620	QRD161J-271	270	1/6W	CARBON	
R621	QRD161J-271	270	1/6W	CARBON	
R622	QRD161J-105	1M	1/6W	CARBON	
R623	QRD161J-561	560	1/6W	CARBON	
R624	QRD161J-102	1K	1/6W	CARBON	
R625	QRD161J-222	2.2K	1/6W	CARBON	
R631	QRD161J-332	3.3K	1/6W	CARBON	
R632	QRD161J-222	2.2K	1/6W	CARBON	
R633	QRD161J-104	100K	1/6W	CARBON	
R634	QRD161J-102	1K	1/6W	CARBON	
R635	QRD161J-331	330	1/6W	CARBON	
△ R636	QRZ0077-150	15	1/4W	FUSIBLE	M NBS O P
△ R636	QRZ0077-150	15	1/4W	FUSIBLE	
△ R636	QRZ0077-150	15	1/4W	FUSIBLE	
△ R636	QRZ0077-150	15	1/4W	FUSIBLE	
R637	QVZ3518-224	220K	0.1W	VARIABLE	
R638	QVZ3518-224	220K	0.1W	VARIABLE	
R639	QRD161J-473	47K	1/6W	CARBON	
R640	QRD161J-473	47K	1/6W	CARBON	
R641	QRD161J-100	10	1/6W	CARBON	
R642	QRD161J-100	10	1/6W	CARBON	

RESISTORS

ITEM	PART NUMBER	DESCRIPTION			AREA
R643	QRD161J-102	1K	1/6W	CARBON	
R644	QRD161J-222	2.2K	1/6W	CARBON	
R645	QRD161J-562	5.6K	1/6W	CARBON	
R646	QRD161J-471	470	1/6W	CARBON	
R647	QRD161J-473	47K	1/6W	CARBON	
R648	QRD161J-473	47K	1/6W	CARBON	
R651	QRD161J-394	390K	1/6W	CARBON	
R652	QRD161J-224	220K	1/6W	CARBON	
R653	QRD161J-472	4.7K	1/6W	CARBON	
R654	QRD161J-472	4.7K	1/6W	CARBON	
R655	QRD161J-104	100K	1/6W	CARBON	
R658	QRD161J-223	22K	1/6W	CARBON	
R659	QRD161J-473	47K	1/6W	CARBON	
R660	QRD161J-223	22K	1/6W	CARBON	
R661	QRD161J-103	10K	1/6W	CARBON	
R662	QRD161J-103	10K	1/6W	CARBON	
R663	QRD161J-392	3.9K	1/6W	CARBON	
R664	QRD161J-392	3.9K	1/6W	CARBON	
R665	QRD161J-103	10K	1/6W	CARBON	
R666	QRD161J-103	10K	1/6W	CARBON	
R667	QRD161J-103	10K	1/6W	CARBON	
R668	QRD161J-103	10K	1/6W	CARBON	
R669	QRD161J-103	10K	1/6W	CARBON	
R670	QRD161J-103	10K	1/6W	CARBON	
R671	QRD161J-103	10K	1/6W	CARBON	
R672	QRD161J-103	10K	1/6W	CARBON	
R673	QRD161J-473	47K	1/6W	CARBON	
R674	QRD161J-473	47K	1/6W	CARBON	
R675	QRD161J-473	47K	1/6W	CARBON	
R676	QRD161J-473	47K	1/6W	CARBON	
R677	QRD161J-223	22K	1/6W	CARBON	
R678	QRD161J-473	47K	1/6W	CARBON	
R679	QRD161J-333	33K	1/6W	CARBON	
R680	QRD161J-223	22K	1/6W	CARBON	
R681	QRD161J-105	1M	1/6W	CARBON	
R682	QRD161J-103	10K	1/6W	CARBON	
R683	QRD161J-105	1M	1/6W	CARBON	
R684	QRD161J-473	47K	1/6W	CARBON	
R685	QRD161J-473	47K	1/6W	CARBON	
R686	QRD161J-223	22K	1/6W	CARBON	
R687	QVZ3518-103	10K	0.1W	VARIABLE	
R688	QVP4A08-472	4.7K		VARIABLE	
R689	QVZ3518-473	47K	0.1W	VARIABLE	
R690	QVZ3518-473	47K	0.1W	VARIABLE	
△ R691	QRZ0077-220	22	1/4W	FUSIBLE	
△ R691	QRZ0077-220	22	1/4W	FUSIBLE	M NBS O P
△ R691	QRZ0077-220	22	1/4W	FUSIBLE	
△ R691	QRZ0077-220	22	1/4W	FUSIBLE	
R693	QRD161J-102	1K	1/6W	CARBON	
R694	QRD161J-473	47K	1/6W	CARBON	
R696	QRD161J-221	220	1/6W	CARBON	
R697	QRD161J-222	2.2K	1/6W	CARBON	
R698	QRD161J-102	1K	1/6W	CARBON	
R699	QRD161J-104	100K	1/6W	CARBON	
RA601	QRB035J-223	22K		ARRAY	
RA602	QRB035J-223	22K		ARRAY	
RA611	QRB045J-474	470K		ARRAY	

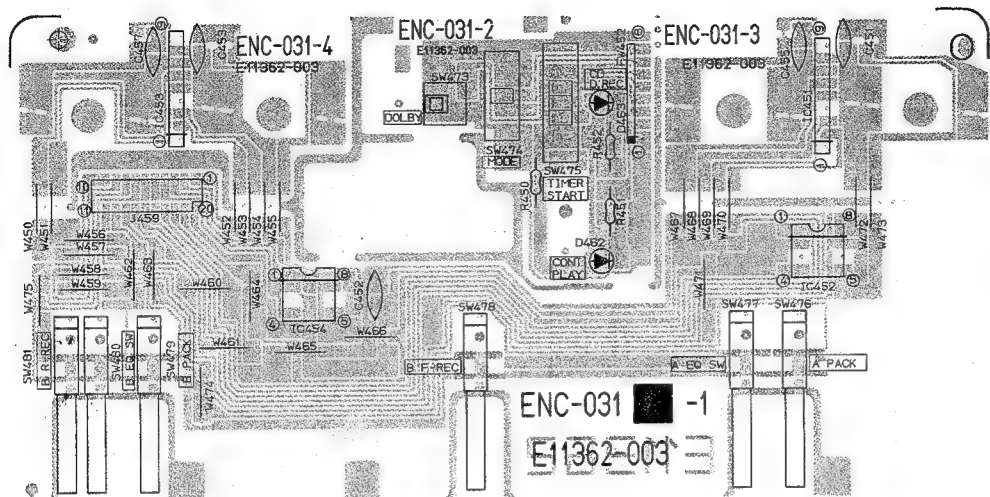
OTHERS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	J307	BMV7112-005	SOCKET	
	J451	BMV7112-008	SOCKET	
	J452	BMV7112-008	SOCKET	
	J453	BMV7112-007	SOCKET	
	J454	BMV7112-006	SOCKET	
	J501	EMB90VV-401A	SPEAKER TERMINAL	
	J550	QMA1221-009	DC JACK	
	J603	BMV7112-004	SOCKET	
	J650	QMS3533-001	JACK ASSY	
	L501	BQL0001-R45	INDUCTOR	
	L502	BQL0001-R45	INDUCTOR	
	L631	BNZ6003-006	BIAS OSC	
	L633	BQL2106-223	INDUCTOR	
	L634	BQL2106-223	INDUCTOR	
	L635	BQF0401-002	FILTER	
	L636	BQF0401-002	FILTER	
	L650	BQL6001-471	INDUCTOR	
	P302	BMV5118-010S	PLUG ASSY	
	P303	BMV5118-012S	PLUG ASSY	
	P455	BMV5119-007S	7P PLUG ASSY	
	P456	BMV5119-006S	6P PLUG ASSY	
	P459	BMV5118-020S	PLUG ASSY	
	P550	B67764-006	R. TERMINAL	
	P604	BMV5103-002A	PLUG ASSY	
	P631	BMV5113-009S	PLUG ASSY	
	P632	QMV5005-003K	PLUG ASSY	
	P633	BMV5113-005S	PLUG ASSY	
	RT002	B67764-203	TERMINAL ASSY	NBS
	RT002	B67764-203	TERMINAL ASSY	O
	RT002	B67764-203	TERMINAL ASSY	P
	RT003	B67764-202	R. TERMINAL	M
	RT003	B67764-202	R. TERMINAL	NBS
	RT003	B67764-202	R. TERMINAL	O
	RT003	B67764-202	R. TERMINAL	P
	RT004	B67764-203	TERMINAL ASSY	M
	RY501	ESK7024-211	RELAY	
	S001	QSP1106-004	PUSH SWITCH	M
	S001	QSP1106-004	PUSH SWITCH	O
	S001	QSP1106-004	PUSH SWITCH	P
	S001	QSP1106-004BS	PUSH SWITCH	NBS
	S631	QSS6A12-E01	SLIDE SWITCH	
	SW467	ESP0001-007	PUSH SWITCH	
	SW468	ESP0001-007	PUSH SWITCH	
	SW469	ESP0001-007	PUSH SWITCH	
	SW470	ESP0001-007	PUSH SWITCH	
	SW471	ESP0001-007	PUSH SWITCH	
	SW472	ESP0001-007	PUSH SWITCH	
	XT601	BCX0004-194KM	RESONATOR	
	XT602	BCX0004-194KM	RESONATOR	
	E11343-402	CIRCUIT BOARD		M
	E11343-402	CIRCUIT BOARD		O
	E11343-402	CIRCUIT BOARD		P
	E11343-402BS	CIRCUIT BOARD		NBS
	E65508-002	TAB		
	E70859-001	EARTH PLATE		P
	E70859-001	EARTH PLATE		
	E70945-H25	HEAT SINK		
	E70945-H35	HEAT SINK		
	EMG7331-001	FUSE CLIP		
	ENJ-004E	EQ MODULE UNIT		
	ENJ-011C	NR MODULE UNIT		M
	ENJ-011C	NR MODULE UNIT		NBS
	ENJ-011C	NR MODULE UNIT		O
	ENJ-011C	NR MODULE UNIT		P

OTHERS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
		SBSB3010Z	T. SCREW	

■ ENC-031 **A** Motor PC Board Ass'y



I.C.S

△	ITEM	PART NUMBER	DESCRIPTION		AREA
				MAKER	
	IC451	BA6208	I.C.	ROHM	
	IC452	LB1639	I.C.	SANYO	
	IC453	BA6208	I.C.	ROHM	
	IC454	LB1639	I.C.	SANYO	

DIODES

△	ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER		
	D462	SLH-56MC50F130	L.E.D.	ROHM	
	D463	SLH-56VC50F130	L.E.D.	ROHM	

CAPACITORS

ITEM	PART NUMBER	DESCRIPTION			AREA
C451	QCF21HP-223	0.022MF	50V	CERAMIC	
C452	QCF21HP-223	0.022MF	50V	CERAMIC	
C453	QCF21HP-223	0.022MF	50V	CERAMIC	
C455	QCF21HP-223	0.022MF	50V	CERAMIC	
C457	QCF21HP-223	0.022MF	50V	CERAMIC	

RESISTORS

ITEM	PART NUMBER	DESCRIPTION			AREA
R450	QRD148J-392S	3.9K	1/4W	CARBON	
R451	QRD148J-271S	270	1/4W	CARBON	
R452	QRD148J-271S	270	1/4W	CARBON	

OTHERS

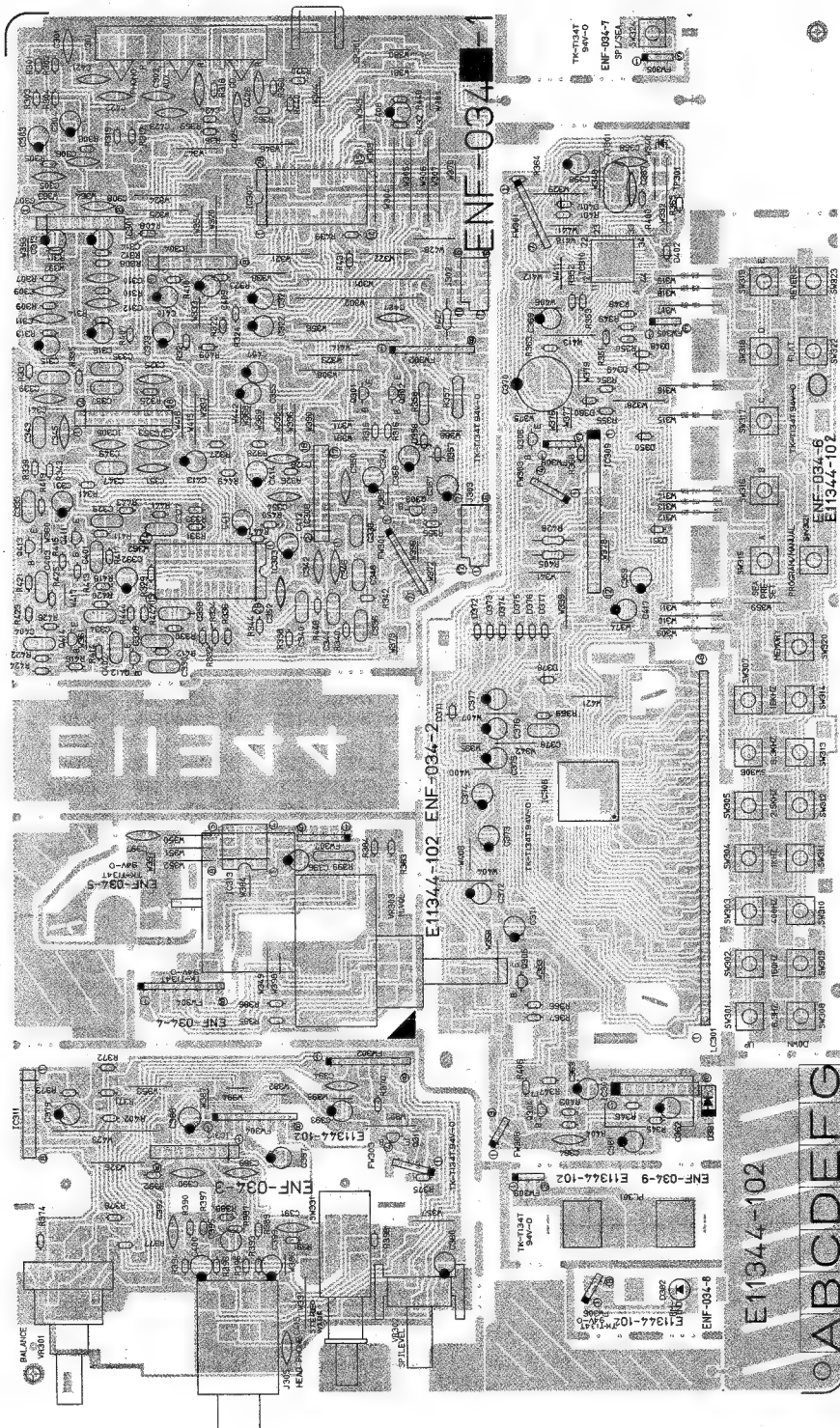
ITEM	PART NUMBER	DESCRIPTION	AREA
J459	BMV7118-020R	20P JACK ASSY	
SW473	QSP2256-001	PUSH SWITCH	
SW474	QSS1F22-B02	SLIDE SWITCH	
SW475	QSS2301-011	SLIDE SWITCH	
SW476	ESB1100-003	LEAF SWITCH	
SW477	ESB1100-003	LEAF SWITCH	
SW478	ESB1100-003	LEAF SWITCH	
SW479	ESB1100-003	LEAF SWITCH	
SW480	ESB1100-003	LEAF SWITCH	
SW481	ESB1100-003	LEAF SWITCH	
	E11362-003	CIRCUIT BOARD	

■ ENF-034 ☐ SEA & Source Selector PC Board Ass'y

Note : ENF-034 ☐ Varies according to the areas employed. See note (1) when placing an order.

Note (1)

PC Board Ass'y	Designated Areas
ENF-034 <input type="checkbox"/> A	Europe, Australia, U.K., U.S. Military Market & Other Countries
ENF-034 <input type="checkbox"/> B	West Germany



TRANSISTORS

▲	ITEM	PART NUMBER	DESCRIPTION		AREA
				MAKER	
	Q301	2SD1302 (S, T)	SILICON	MATSUSHITA	
	Q302	2SD1302 (S, T)	SILICON	MATSUSHITA	
	Q303	2SA564A (Q, R)	SILICON	MATSUSHITA	
	Q304	2SC1685 (Q, R)	SILICON	MATSUSHITA	
	Q305	2SA564A (Q, R)	SILICON	MATSUSHITA	
..	Q306	DTA144EN	SILICON	ROHM
	Q311	2SC1740 (R, S)	SILICON	ROHM	
	Q411	2SC1740LN (R, S)	SILICON	ROHM	
	Q412	2SC1740LN (R, S)	SILICON	ROHM	
	Q413	2SC1740LN (R, S)	SILICON	ROHM	
..	Q414	2SC1740LN (R, S)	SILICON	ROHM

I.C.S

A	ITEM	PART NUMBER	DESCRIPTION		AREA
				MAKER	
	IC301	M5218L-R	I.C.	MATSUSHITA	
	IC302	TC9164N	I.C.	TOSHIBA	
	IC303	LC7522	I.C.	SANYO	
	IC304	M5218L	I.C.	mitsubishi	
	IC305	BA3812L	I.C.	ROHM	
..	IC306	BA3812L	I.C.	ROHM	
	IC307	UPC1490HA	I.C.	NEC	
	IC308	LC7560	I.C.	SANYO	
	IC309	7EL-SPI-001	I.C.	SANYO	
	IC310	UPD7507HG-507	I.C.	NEC	
..	IC311	M5218L	I.C.	MITSUBISHI	
	IC312	M5218L-R	I.C.	MITSUBISHI	
	IC313	LB1639	I.C.	SANYO	

DIODES

ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER	
D348	1SS133	SILICON	ROHM	
D349	1SS133	SILICON	ROHM	
D350	1SS133	SILICON	ROHM	
D351	1SS133	SILICON	ROHM	
D357	MTZ6.8JC	ZENER	ROHM	
.....				
D358	MTZ6.8JC	ZENER	ROHM	
D371	1SS133	SILICON	ROHM	
D372	1SS133	SILICON	ROHM	
D373	1SS133	SILICON	ROHM	
D374	1SS133	SILICON	ROHM	
.....				
D375	1SS133	SILICON	ROHM	
D376	1SS133	SILICON	ROHM	
D377	1SS133	SILICON	ROHM	
D378	1SS133	SILICON	ROHM	
D380	1SS133	SILICON	ROHM	
.....				
D381	PD49PI	SILICON	SHARP	
D382	SLH-34VC50F	L.E.D.	ROHM	
D401	1SS133	SILICON	ROHM	
D402	1SS133	SILICON	ROHM	

CAPACITORS

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	C301	QCF21HP-103	0.01MF	50V	CERAMIC	A
	C302	QCF21HP-103	0.01MF	50V	CERAMIC	
	C303	QETB1HM-225	2.2MF	50V	ELECTRO	
	C304	QETB1HM-225	2.2MF	50V	ELECTRO	
	C305	QCS21HJ-101	100PF	50V	CERAMIC	
	C306	QCS21HJ-101	100PF	50V	CERAMIC	
	C307	QCS21HJ-101	100PF	50V	CERAMIC	
	C308	QCS21HJ-101	100PF	50V	CERAMIC	
	C309	QCY21HK-182	1800PF	50V	CERAMIC	
	C310	QCY21HK-182	1800PF	50V	CERAMIC	
	C311	QCY21HK-682	6800PF	50V	CERAMIC	
	C312	QCY21HK-682	6800PF	50V	CERAMIC	
	C313	QETB1CM-476	47MF	16V	ELECTRO	
	C314	QETB1CM-476	47MF	16V	ELECTRO	
	C315	QETB1HM-225	2.2MF	50V	ELECTRO	
	C316	QETB1HM-225	2.2MF	50V	ELECTRO	
	C321	QETB1HM-225	2.2MF	50V	ELECTRO	
	C322	QETB1HM-225	2.2MF	50V	ELECTRO	
	C323	QETB1HM-225	2.2MF	50V	ELECTRO	
	C324	QETB1HM-225	2.2MF	50V	ELECTRO	
	C325	QCS21HJ-101	100PF	50V	CERAMIC	
	C326	QCS21HJ-101	100PF	50V	CERAMIC	
	C327	QFV81HJ-684	0.68MF	50V	T. FILM	
	C328	QFV81HJ-684	0.68MF	50V	T. FILM	
	C329	QFN81HJ-683	0.068MF	50V	MYLAR	
	C330	QFN81HJ-683	0.068MF	50V	MYLAR	
	C331	QEK61HM-224G	0.22MF	50V	ELECTRO	
	C332	QEK61HM-224G	0.22MF	50V	ELECTRO	
	C333	QFN81HJ-473	0.047MF	50V	MYLAR	
	C334	QFN81HJ-473	0.047MF	50V	MYLAR	
	C335	QFV81HJ-104	0.1MF	50V	T. FILM	
	C336	QFV81HJ-104	0.1MF	50V	T. FILM	
	C337	QFN81HJ-153	0.015MF	50V	MYLAR	
	C338	QFN81HJ-153	0.015MF	50V	MYLAR	
	C339	QFN81HJ-333	0.033MF	50V	MYLAR	
	C340	QFN81HJ-333	0.033MF	50V	MYLAR	
	C341	QCY21HK-562	5600PF	50V	CERAMIC	
	C342	QCY21HK-562	5600PF	50V	CERAMIC	
	C343	QFN81HJ-123	0.012MF	50V	MYLAR	
	C344	QFN81HJ-123	0.012MF	50V	MYLAR	
	C345	QCY21HK-272	2700PF	50V	CERAMIC	
	C346	QCY21HK-272	2700PF	50V	CERAMIC	
	C347	QFN81HJ-562	5600PF	50V	MYLAR	
	C348	QFN81HJ-562	5600PF	50V	MYLAR	
	C349	QCY21HK-102	1000PF	50V	CERAMIC	
	C350	QCY21HK-102	1000PF	50V	CERAMIC	
	C351	QCY21HK-222	2200PF	50V	CERAMIC	
	C352	QCY21HK-222	2200PF	50V	CERAMIC	
	C353	QCS21HJ-331	330PF	50V	CERAMIC	
	C354	QCS21HJ-331	330PF	50V	CERAMIC	
	C355	QETB1CM-476	47MF	16V	ELECTRO	
	C356	QFN81HJ-223	0.022MF	50V	MYLAR	
	C357	QETB1CM-476	47MF	16V	ELECTRO	
	C358	QETB1CM-476	47MF	16V	ELECTRO	
	C359	QETB1CM-107	100MF	16V	ELECTRO	
	C361	QETB1HM-105	1MF	50V	ELECTRO	
	C362	QEK61HM-475	4.7MF	50V	ELECTRO	
	C363	QETB1AM-227	220MF	10V	ELECTRO	
	C364	QCS21HJ-331	330PF	50V	CERAMIC	
	C367	QCS21HJ-330	33PF	50V	CERAMIC	
	C368	QCS21HJ-330	33PF	50V	CERAMIC	
	C369	QETB1CM-476	47MF	16V	ELECTRO	
	C370	EEZ0502-479	47MF	50V	ELECTRO	
	C371	QETB1HM-474	0.47MF	50V	ELECTRO	
	C372	QETB1HM-474	0.47MF	50V	ELECTRO	

CAPACITORS

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	C373	QETB1HM-474	0.47MF	50V	ELECTRO	
	C374	QETB1HM-474	0.47MF	50V	ELECTRO	
	C375	QETB1HM-474	0.47MF	50V	ELECTRO	
	C376	QETB1HM-474	0.47MF	50V	ELECTRO	
	C377	QETB1HM-474	0.47MF	50V	ELECTRO	
	C378	QFN81HJ-103	0.01MF	50V	MYLAR	
	C379	QETB1CM-476	47MF	16V	ELECTRO	
	C380	QETB1CM-476	47MF	16V	ELECTRO	
	C387	QETB1HM-225	2.2MF	50V	ELECTRO	
	C388	QETB1HM-225	2.2MF	50V	ELECTRO	
	C389	QCS21HJ-470	47PF	50V	CERAMIC	
	C390	QCS21HJ-470	47PF	50V	CERAMIC	
	C391	QCS21HJ-560	56PF	50V	CERAMIC	
	C392	QCS21HJ-560	56PF	50V	CERAMIC	
	C393	QETB1EM-107	100MF	25V	ELECTRO	
	C394	QCF21HP-103	0.01MF	50V	CERAMIC	
	C395	QEN51HM-224	0.22MF	50V	NON POLE	
	C396	QETB1CM-476	47MF	16V	ELECTRO	
	C397	QCF21HP-473	0.047MF	50V	CERAMIC	
	C398	QFN81HJ-103	0.01MF	50V	MYLAR	
	C399	QETB1EM-106	10MF	25V	ELECTRO	
	C400	QETB1EM-106	10MF	25V	ELECTRO	
	C401	QFN81HJ-562	5600PF	50V	MYLAR	
	C402	QFN81HJ-562	5600PF	50V	MYLAR	
	C403	QFN81HJ-472	4700PF	50V	MYLAR	
	C404	QFN81HJ-472	4700PF	50V	MYLAR	
	C407	QETB1HM-475	4.7MF	50V	ELECTRO	
	C408	QETB1HM-475	4.7MF	50V	ELECTRO	
	C409	QETB1HM-475	4.7MF	50V	ELECTRO	
	C410	QETB1HM-475	4.7MF	50V	ELECTRO	
	C411	QETB1HM-475	4.7MF	50V	ELECTRO	
	C412	QETB1HM-475	4.7MF	50V	ELECTRO	
	C413	QETB1HM-475	4.7MF	50V	ELECTRO	
	C414	QETB1HM-475	4.7MF	50V	ELECTRO	
	C415	QCF21HP-473	0.047MF	50V	CERAMIC	
	C417	QETB1CM-107	100MF	16V	ELECTRO	
	C421	QCF21HP-103	0.01MF	50V	CERAMIC	B
	C422	QCF21HP-103	0.01MF	50V	CERAMIC	B
	C423	QCF21HP-103	0.01MF	50V	CERAMIC	B
	C424	QCF21HP-103	0.01MF	50V	CERAMIC	B
	C425	QCF21HP-103	0.01MF	50V	CERAMIC	B
	C426	QCF21HP-103	0.01MF	50V	CERAMIC	B
	C427	QCF21HP-103	0.01MF	50V	CERAMIC	B

RESISTORS

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	R301	QRD161J-104	100K	1/6W	CARBON	
	R302	QRD161J-104	100K	1/6W	CARBON	
	R303	QRD161J-272	2.7K	1/6W	CARBON	
	R304	QRD161J-272	2.7K	1/6W	CARBON	
	R305	QRD161J-104	100K	1/6W	CARBON	
	R306	QRD161J-104	100K	1/6W	CARBON	
	R307	QRD161J-393	39K	1/6W	CARBON	
	R308	QRD161J-393	39K	1/6W	CARBON	
	R309	QRD161J-474	470K	1/6W	CARBON	
	R310	QRD161J-474	470K	1/6W	CARBON	
	R311	QRD161J-102	1K	1/6W	CARBON	
	R312	QRD161J-102	1K	1/6W	CARBON	
	R313	QRD161J-102	1K	1/6W	CARBON	
	R314	QRD161J-102	1K	1/6W	CARBON	
	R315	QRD161J-473	47K	1/6W	CARBON	

RESISTORS

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	R316	QRD161J-473	47K	1/6W	CARBON	
	R317	QRD161J-223	22K	1/6W	CARBON	
	R318	QRD161J-223	22K	1/6W	CARBON	
	R319	QRD161J-333	33K	1/6W	CARBON	
	R320	QRD161J-333	33K	1/6W	CARBON	
	R321	QRD161J-182	1.8K	1/6W	CARBON	
	R322	QRD161J-182	1.8K	1/6W	CARBON	
	R323	QRD161J-224	220K	1/6W	CARBON	
	R324	QRD161J-224	220K	1/6W	CARBON	
	R325	QRD161J-912	9.1K	1/6W	CARBON	
	R326	QRD161J-912	9.1K	1/6W	CARBON	
	R327	QRD161J-912	9.1K	1/6W	CARBON	
	R328	QRD161J-912	9.1K	1/6W	CARBON	
	R329	QRD161J-182	1.8K	1/6W	CARBON	
	R330	QRD161J-512	5.1K	1/6W	CARBON	
	R331	QRD161J-474	470K	1/6W	CARBON	
	R332	QRD161J-474	470K	1/6W	CARBON	
	R333	QRD161J-474	470K	1/6W	CARBON	
	R334	QRD161J-474	470K	1/6W	CARBON	
	R335	QRD161J-474	470K	1/6W	CARBON	
	R336	QRD161J-474	470K	1/6W	CARBON	
	R337	QRD161J-474	470K	1/6W	CARBON	
	R338	QRD161J-474	470K	1/6W	CARBON	
	R339	QRD161J-474	470K	1/6W	CARBON	
	R340	QRD161J-474	470K	1/6W	CARBON	
	R341	QRD161J-474	470K	1/6W	CARBON	
	R342	QRD161J-474	470K	1/6W	CARBON	
	R343	QRD161J-474	470K	1/6W	CARBON	
	R344	QRD161J-474	470K	1/6W	CARBON	
	R345	QRD161J-4R7	4.7	1/6W	CARBON	
	R346	QRD161J-164	160K	1/6W	CARBON	
	R347	QRD161J-330	33	1/6W	CARBON	
	R348	QRD161J-104	100K	1/6W	CARBON	
	R349	QRD161J-104	100K	1/6W	CARBON	
	R350	QRD161J-104	100K	1/6W	CARBON	
	R351	QRD161J-104	100K	1/6W	CARBON	
	R352	QRD161J-104	100K	1/6W	CARBON	
	R353	QRD161J-104	100K	1/6W	CARBON	
	R354	QRD161J-104	100K	1/6W	CARBON	
	R355	QRD161J-104	100K	1/6W	CARBON	
	R356	QRD161J-103	10K	1/6W	CARBON	
	R357	QRD161J-181	180	1/6W	CARBON	
	R358	QRD161J-221	220	1/6W	CARBON	
	R359	QRD161J-223	22K	1/6W	CARBON	
	R360	QRD161J-223	22K	1/6W	CARBON	
	R361	QRD161J-333	33K	1/6W	CARBON	
	R362	QRD161J-333	33K	1/6W	CARBON	
	R363	QRD161J-331	330	1/6W	CARBON	
	R364	QRD161J-103	10K	1/6W	CARBON	
	R365	QRD161J-103	10K	1/6W	CARBON	
	R366	QRD161J-103	10K	1/6W	CARBON	
	R367	QRD161J-151	150	1/6W	CARBON	
	R368	QRD161J-154	150K	1/6W	CARBON	
	R369	QRD161J-273	27K	1/6W	CARBON	
	R370	QRD161J-223	22K	1/6W	CARBON	
	R371	QRD161J-823	82K	1/6W	CARBON	
	R372	QRD161J-823	82K	1/6W	CARBON	
	R373	QRD161J-334	330K	1/6W	CARBON	
	R374	QRD161J-102	1K	1/6W	CARBON	
	R375	QRD161J-223	22K	1/6W	CARBON	
	R377	QRD161J-682	6.8K	1/6W	CARBON	
	R378	QRD161J-682	6.8K	1/6W	CARBON	
	R383	QRD161J-103	10K	1/6W	CARBON	
	R384	QRD161J-103	10K	1/6W	CARBON	
	R385	QRD161J-330	33	1/6W	CARBON	

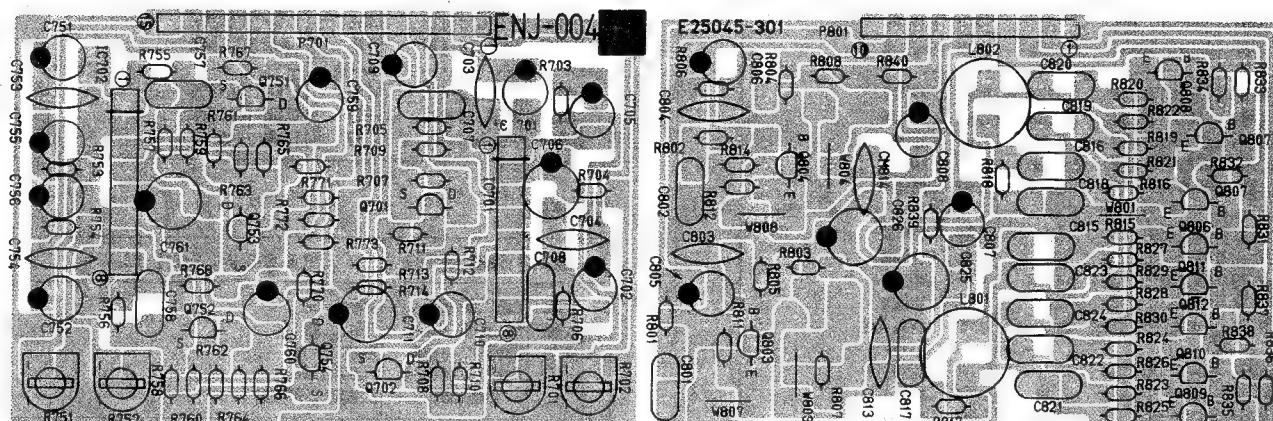
RESISTORS

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	R386	QRD161J-330	33	1/6W	CARBON	
	R387	QRD161J-393	39K	1/6W	CARBON	
	R388	QRD161J-393	39K	1/6W	CARBON	
	R389	QRD161J-102	1K	1/6W	CARBON	
	R390	QRD161J-102	1K	1/6W	CARBON	
	R391	QRD161J-393	39K	1/6W	CARBON	
	R392	QRD161J-393	39K	1/6W	CARBON	
	R393	QRD161J-102	1K	1/6W	CARBON	
	R394	QRD161J-102	1K	1/6W	CARBON	
	R395	QRD161J-560	56	1/6W	CARBON	
	R396	QRD161J-560	56	1/6W	CARBON	
	R397	QRD161J-222	2.2K	1/6W	CARBON	
	R398	QRD161J-105	1M	1/6W	CARBON	
△	R399	QRZ0077-100	10	1/4W	FUSIBLE	
	R400	QRD161J-102	1K	1/6W	CARBON	
	R401	QRD161J-104	100K	1/6W	CARBON	
	R402	QRD161J-102	1K	1/6W	CARBON	
	R403	QRD161J-104	100K	1/6W	CARBON	
	R404	QRD161J-223	22K	1/6W	CARBON	
△	R405	QRD145J-100S	10	1/4W	UNF. CARBON	
	R406	QRD161J-104	100K	1/6W	CARBON	
	R407	QRD161J-224	220K	1/6W	CARBON	
	R408	QRD161J-224	220K	1/6W	CARBON	
	R409	QRD161J-224	220K	1/6W	CARBON	
	R410	QRD161J-224	220K	1/6W	CARBON	
	R411	QRD161J-821	820	1/6W	CARBON	
	R412	QRD161J-821	820	1/6W	CARBON	
	R413	QRD161J-223	22K	1/6W	CARBON	
	R414	QRD161J-223	22K	1/6W	CARBON	
	R415	QRD161J-154	150K	1/6W	CARBON	
	R416	QRD161J-154	150K	1/6W	CARBON	
	R417	QRD161J-103	10K	1/6W	CARBON	
	R418	QRD161J-103	10K	1/6W	CARBON	
	R419	QRD161J-821	820	1/6W	CARBON	
	R420	QRD161J-821	820	1/6W	CARBON	
	R421	QRD161J-153	15K	1/6W	CARBON	
	R422	QRD161J-153	15K	1/6W	CARBON	
	R423	QRD161J-104	100K	1/6W	CARBON	
	R424	QRD161J-104	100K	1/6W	CARBON	
	R425	QRD161J-103	10K	1/6W	CARBON	
	R426	QRD161J-103	10K	1/6W	CARBON	
△	R427	QRZ0062-330	33	1/4W	FUSIBLE	
△	R428	QRZ0062-100	10	1/4W	FUSIBLE	
	R431	QRD161J-102	1K	1/6W	CARBON	
	R432	QRD161J-102	1K	1/6W	CARBON	
	R439	QRD161J-224	220K	1/6W	CARBON	
	R440	QRD161J-224	220K	1/6W	CARBON	
	R441	QRD161J-181	180	1/6W	CARBON	
	R442	QRD161J-181	180	1/6W	CARBON	
	R443	QRD161J-221	220	1/6W	CARBON	
	R444	QRD161J-221	220	1/6W	CARBON	
	R447	QRD161J-224	220K	1/6W	CARBON	
	R448	QRD161J-224	220K	1/6W	CARBON	
	R449	QRD161J-224	220K	1/6W	CARBON	
	R450	QRD161J-224	220K	1/6W	CARBON	

OTHERS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	BP301	E70225-001	EARTH PLATE	
	J301	BMN00TV-602A	PIN JACK ASSY	
	J302	EMV7118-010R	10P JACK ASSY	
	J303	EMV7118-012R	12P JACK ASSY	
	J305	QMS6313-020	JACK ASSY	
	LC301	ELU0002-014	LCD PANEL	
	SW301	ESP0001-007	PUSH SWITCH	
	SW302	ESP0001-007	PUSH SWITCH	
	SW303	ESP0001-007	PUSH SWITCH	
	SW304	ESP0001-007	PUSH SWITCH	
	SW305	ESP0001-007	PUSH SWITCH	
	SW306	ESP0001-007	PUSH SWITCH	
	SW307	ESP0001-007	PUSH SWITCH	
	SW308	ESP0001-007	PUSH SWITCH	
	SW309	ESP0001-007	PUSH SWITCH	
	SW310	ESP0001-007	PUSH SWITCH	
	SW311	ESP0001-007	PUSH SWITCH	
	SW312	ESP0001-007	PUSH SWITCH	
	SW313	ESP0001-007	PUSH SWITCH	
	SW314	ESP0001-007	PUSH SWITCH	
	SW315	ESP0001-007	PUSH SWITCH	
	SW316	ESP0001-007	PUSH SWITCH	
	SW317	ESP0001-007	PUSH SWITCH	
	SW318	ESP0001-007	PUSH SWITCH	
	SW319	ESP0001-007	PUSH SWITCH	
	SW320	ESP0001-007	PUSH SWITCH	
	SW321	ESP0001-007	PUSH SWITCH	
	SW322	ESP0001-007	PUSH SWITCH	
	SW323	ESP0001-007	PUSH SWITCH	
	SW324	ESP0001-007	PUSH SWITCH	
	SW331	QST4102-B07	PUSH SWITCH	
	XT301	BCX0004-190KU	CERA. RESONATOR	
		E11344-101	CIRCUIT BOARD	
		B45524-002	FUSE CLIP	
		E73647-001	SHIELD COVER	
		E73648-001	SHIELD COVER	
		FE-ZMS409	SHIELD RING	

ENJ-004 **E** Equalizer P.C. Board Ass'y



TRANSISTORS

ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER	
Q701	2SK301 (P, Q)	F.E.T	MATSUSHITA	
Q702	2SK301 (P, Q)	F.E.T	MATSUSHITA	
Q751	2SK301 (P, Q)	F.E.T	MATSUSHITA	
Q752	2SK301 (P, Q)	F.E.T	MATSUSHITA	
Q753	2SK301 (P, Q)	F.E.T	MATSUSHITA	
Q754	2SK301 (P, Q)	F.E.T	MATSUSHITA	
Q803	2SC1740LN (R, S)	SILICON	ROHM	
Q804	2SC1740LN (R, S)	SILICON	ROHM	
Q805	2SC1685 (Q, R)	SILICON	MATSUSHITA	
Q806	2SC1685 (Q, R)	SILICON	MATSUSHITA	
Q807	2SC1685 (Q, R)	SILICON	MATSUSHITA	
Q808	2SC1685 (Q, R)	SILICON	MATSUSHITA	
Q809	2SC1685 (Q, R)	SILICON	MATSUSHITA	
Q810	2SC1685 (Q, R)	SILICON	MATSUSHITA	
Q811	2SC1685 (Q, R)	SILICON	MATSUSHITA	
Q812	2SC1685 (Q, R)	SILICON	MATSUSHITA	

I.C.S

ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER	
IC701	M51522L	I.C.	mitsubishi	
IC702	M51522L	I.C.	mitsubishi	

CAPACITORS

ITEM	PART NUMBER	DESCRIPTION			AREA
C701	QEK61HM-225G	2.2MF	50V	ELECTRO	
C702	QEK61HM-225G	2.2MF	50V	ELECTRO	
C703	QCS21HJ-101	100PF	50V	CERAMIC	
C704	QCS21HJ-101	100PF	50V	CERAMIC	
C705	QETB1AM-107	100MF	10V	ELECTRO	
C706	QETB1AM-107	100MF	10V	ELECTRO	
C707	QFN81HJ-822	8200PF	50V	MYLAR	
C708	QFN81HJ-822	8200PF	50V	MYLAR	
C709	QEK61HM-105G	1MF	50V	ELECTRO	
C710	QEK61HM-105G	1MF	50V	ELECTRO	

CAPACITORS

ITEM	PART NUMBER	DESCRIPTION			AREA
C711	QEK61CM-107	100MF	16V	ELECTRO	
C751	QEK61HM-225G	2.2MF	50V	ELECTRO	
C752	QEK61HM-225G	2.2MF	50V	ELECTRO	
C753	QCS21HJ-101	100PF	50V	CERAMIC	
C754	QCS21HJ-101	100PF	50V	CERAMIC	
C755	QETB1AM-107	100MF	10V	ELECTRO	
C756	QETB1AM-107	100MF	10V	ELECTRO	
C757	QFN81HJ-822	8200PF	50V	MYLAR	
C758	QFN81HJ-822	8200PF	50V	MYLAR	
C759	QEK61HM-105G	1MF	50V	ELECTRO	
C760	QEK61HM-105G	1MF	50V	ELECTRO	
C761	QEK61CM-107	100MF	16V	ELECTRO	
C801	QCF21HP-473	0.047MF	50V	CERAMIC	
C802	QCF21HP-473	0.047MF	50V	CERAMIC	
C803	QCS21HJ-151	150PF	50V	CERAMIC	
C804	QCS21HJ-151	150PF	50V	CERAMIC	
C805	QETB1HM-225	2.2MF	50V	ELECTRO	
C806	QETB1HM-225	2.2MF	50V	ELECTRO	
C807	QEK61HM-225G	2.2MF	50V	ELECTRO	
C808	QEK61HM-225G	2.2MF	50V	ELECTRO	
C811	QEK61CM-106G	10MF	16V	ELECTRO	
C812	QEK61CM-106G	10MF	16V	ELECTRO	
C813	QCS21HJ-271	270PF	50V	CERAMIC	
C814	QCS21HJ-271	270PF	50V	CERAMIC	
C815	QFN81HJ-822	8200PF	50V	MYLAR	
C816	QFN81HJ-822	8200PF	50V	MYLAR	
C817	QFN81HJ-392	3900PF	50V	MYLAR	
C818	QFN81HJ-392	3900PF	50V	MYLAR	
C819	QFN81HJ-123	0.012MF	50V	MYLAR	
C820	QFN81HJ-123	0.012MF	50V	MYLAR	
C821	QFN81HJ-332	3300PF	50V	MYLAR	
C822	QFN81HJ-332	3300PF	50V	MYLAR	
C823	QFN81HJ-103	0.01MF	50V	MYLAR	
C824	QFN81HJ-103	0.01MF	50V	MYLAR	
C825	QEK61CM-107	100MF	16V	ELECTRO	
C826	QEK61CM-107	100MF	16V	ELECTRO	

RESISTORS

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	R701	QVZ3518-221	220	0.1W	VARIABLE	
	R702	QVZ3518-221	220	0.1W	VARIABLE	
	R703	QRD161J-101	100	1/6W	CARBON	
	R704	QRD161J-101	100	1/6W	CARBON	
	R705	QRD161J-334	330K	1/6W	CARBON	
	R706	QRD161J-334	330K	1/6W	CARBON	
	R707	QRD161J-682	6.8K	1/6W	CARBON	
	R708	QRD161J-682	6.8K	1/6W	CARBON	
	R709	QRD161J-822	8.2K	1/6W	CARBON	
	R710	QRD161J-822	8.2K	1/6W	CARBON	
	R711	QRD161J-105	1M	1/6W	CARBON	
	R712	QRD161J-105	1M	1/6W	CARBON	
	R713	QRD161J-472	4.7K	1/6W	CARBON	
	R714	QRD161J-471	470	1/6W	CARBON	
	R751	QVZ3518-221	220	0.1W	VARIABLE	
	R752	QVZ3518-221	220	0.1W	VARIABLE	
	R753	QRD161J-101	100	1/6W	CARBON	
	R754	QRD161J-101	100	1/6W	CARBON	
	R755	QRD161J-334	330K	1/6W	CARBON	
	R756	QRD161J-334	330K	1/6W	CARBON	
	R757	QRD161J-432	4.3K	1/6W	CARBON	
	R758	QRD161J-432	4.3K	1/6W	CARBON	
	R759	QRD161J-272	2.7K	1/6W	CARBON	
	R760	QRD161J-272	2.7K	1/6W	CARBON	
	R761	QRD161J-512	5.1K	1/6W	CARBON	
	R762	QRD161J-512	5.1K	1/6W	CARBON	
	R763	QRD161J-332	3.3K	1/6W	CARBON	
	R764	QRD161J-332	3.3K	1/6W	CARBON	
	R765	QRD161J-223	22K	1/6W	CARBON	
	R766	QRD161J-223	22K	1/6W	CARBON	
	R767	QRD161J-105	1M	1/6W	CARBON	
	R768	QRD161J-105	1M	1/6W	CARBON	
	R769	QRD161J-105	1M	1/6W	CARBON	
	R770	QRD161J-105	1M	1/6W	CARBON	
	R771	QRD161J-471	470	1/6W	CARBON	
	R772	QRD161J-472	4.7K	1/6W	CARBON	
	R773	QRD161J-472	4.7K	1/6W	CARBON	
	R801	QRD161J-333	33K	1/6W	CARBON	
	R802	QRD161J-333	33K	1/6W	CARBON	
	R803	QRD161J-474	470K	1/6W	CARBON	
	R804	QRD161J-474	470K	1/6W	CARBON	
	R805	QRD161J-683	68K	1/6W	CARBON	
	R806	QRD161J-683	68K	1/6W	CARBON	
	R807	QRD161J-153	15K	1/6W	CARBON	
	R808	QRD161J-153	15K	1/6W	CARBON	
	R811	QRD161J-182	1.8K	1/6W	CARBON	
	R812	QRD161J-182	1.8K	1/6W	CARBON	
	R815	QRD161J-101	100	1/6W	CARBON	
	R816	QRD161J-101	100	1/6W	CARBON	
	R817	QRD161J-330	33	1/6W	CARBON	
	R818	QRD161J-330	33	1/6W	CARBON	
	R819	QRD161J-222	2.2K	1/6W	CARBON	
	R820	QRD161J-222	2.2K	1/6W	CARBON	
	R821	QRD161J-332	3.3K	1/6W	CARBON	
	R822	QRD161J-332	3.3K	1/6W	CARBON	
	R823	QRD161J-221	220	1/6W	CARBON	
	R824	QRD161J-221	220	1/6W	CARBON	
	R825	QRD161J-104	100K	1/6W	CARBON	
	R826	QRD161J-104	100K	1/6W	CARBON	
	R827	QRD161J-221	220	1/6W	CARBON	
	R828	QRD161J-221	220	1/6W	CARBON	
	R829	QRD161J-332	3.3K	1/6W	CARBON	
	R830	QRD161J-332	3.3K	1/6W	CARBON	
	R831	QRD161J-473	47K	1/6W	CARBON	
	R832	QRD161J-473	47K	1/6W	CARBON	

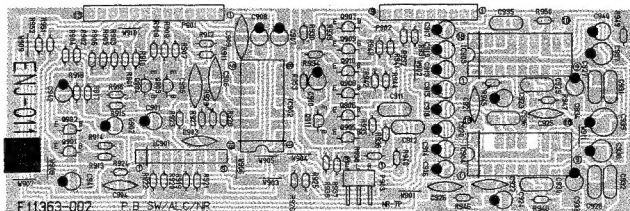
RESISTORS

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	R833	QRD161J-473	47K	1/6W	CARBON	
	R834	QRD161J-473	47K	1/6W	CARBON	
	R835	QRD161J-473	47K	1/6W	CARBON	
	R836	QRD161J-473	47K	1/6W	CARBON	
	R837	QRD161J-473	47K	1/6W	CARBON	
	R838	QRD161J-473	47K	1/6W	CARBON	
	R839	QRD161J-101	100	1/6W	CARBON	
	R840	QRD161J-101	100	1/6W	CARBON	E

OTHERS

△	ITEM	PART NUMBER	DESCRIPTION	AREA
	L801	EQL2106-562	INDUCTOR	
	L802	EQL2106-562	INDUCTOR	
	P701	EMV5101-015B	PLUG ASSY	
	P801	EMV5101-010B	PLUG ASSY	
		E25045-301	CIRCUIT BOARD	

■ ENJ-011 C ALC & NR PC Board Ass'y



CAPACITORS

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	C916	QEK61HM-105G	1MF	50V	ELECTRO	
	C917	QEK61EM-475G	4.7MF	25V	ELECTRO	
	C918	QEK61EM-475G	4.7MF	25V	ELECTRO	
	C919	QEK61EM-475G	4.7MF	25V	ELECTRO	
	C920	QEK61EM-475G	4.7MF	25V	ELECTRO	
	C921	QCF21HP-103	0.01MF	50V	CERAMIC	
	C922	QCF21HP-103	0.01MF	50V	CERAMIC	
	C923	QEK61HM-105G	1MF	50V	ELECTRO	
	C924	QEK61HM-105G	1MF	50V	ELECTRO	
	C925	QCY21HK-122	1200PF	50V	CERAMIC	
	C926	QCY21HK-122	1200PF	50V	CERAMIC	
	C927	QFV81HJ-683	0.068MF	50V	T.FILM	
	C928	QFV81HJ-683	0.068MF	50V	T.FILM	
	C929	QFN81HJ-272	2700PF	50V	MYLAR	
	C930	QFN81HJ-272	2700PF	50V	MYLAR	
	C931	QFV81HJ-104	0.1MF	50V	T.FILM	
	C932	QFV81HJ-104	0.1MF	50V	T.FILM	
	C933	QEK61EM-475G	4.7MF	25V	ELECTRO	
	C934	QEK61EM-475G	4.7MF	25V	ELECTRO	
	C935	QFN81HJ-182	1800PF	50V	MYLAR	
	C936	QFN81HJ-182	1800PF	50V	MYLAR	
	C937	QETB1AM-107	100MF	10V	ELECTRO	
	C938	QETB1AM-107	100MF	10V	ELECTRO	
	C939	QETB1CM-107	100MF	16V	ELECTRO	
	C940	QEK61EM-106	10MF	25V	ELECTRO	
	C941	QEK61EM-475G	4.7MF	25V	ELECTRO	
	C942	QEK61EM-475G	4.7MF	25V	ELECTRO	

TRANSISTORS

△	ITEM	PART NUMBER	DESCRIPTION		AREA
				MAKER	
	Q901	2SD1302(S,T)	SILICON	MATSUSHITA	
	Q902	2SD1302(S,T)	SILICON	MATSUSHITA	
	Q903	2SD1302(S,T)	SILICON	MATSUSHITA	
	Q904	2SD1302(S,T)	SILICON	MATSUSHITA	
	Q905	2SC1740(R,S)	SILICON	ROHM	
	Q906	2SC1740(R,S)	SILICON	ROHM	
	Q907	2SC1740(R,S)	SILICON	ROHM	
	Q908	2SC1740(R,S)	SILICON	ROHM	
	Q909	2SC1740(R,S)	SILICON	ROHM	
	Q910	2SC1740(R,S)	SILICON	ROHM	
	Q911	2SC1740(R,S)	SILICON	ROHM	

I.C.S

△	ITEM	PART NUMBER	DESCRIPTION		AREA
				MAKER	
	IC901	M5218L	I.C.	mitsubishi	
	IC902	TC4053BP	I.C.	TOSHIBA	
	IC903	AN7363N	I.C.	MATSUSHITA	
	IC904	AN7363N	I.C.	MATSUSHITA	

CAPACITORS

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	C901	QEK61HM-105G	1MF	50V	ELECTRO	
	C902	QEK61HM-105G	1MF	50V	ELECTRO	
	C903	QCS21HJ-220	22PF	50V	CERAMIC	
	C904	QCS21HJ-220	22PF	50V	CERAMIC	
	C905	QCF21HP-223	0.022MF	50V	CERAMIC	
	C906	QCF21HP-223	0.022MF	50V	CERAMIC	
	C907	QEK61EM-475G	4.7MF	25V	ELECTRO	
	C908	QEK61EM-475G	4.7MF	25V	ELECTRO	
	C909	QCF21HP-223	0.022MF	50V	CERAMIC	
	C910	QEK61EM-106	10MF	25V	ELECTRO	
	C911	QCF21HP-473	0.047MF	50V	CERAMIC	
	C912	QCF21HP-473	0.047MF	50V	CERAMIC	
	C913	QEK61HM-105G	1MF	50V	ELECTRO	
	C914	QEK61HM-105G	1MF	50V	ELECTRO	
	C915	QEK61HM-105G	1MF	50V	ELECTRO	

RESISTORS

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	R901	QRD161J-562	5.6K	1/6W	CARBON	
	R902	QRD161J-562	5.6K	1/6W	CARBON	
	R903	QRD161J-103	10K	1/6W	CARBON	
	R904	QRD161J-103	10K	1/6W	CARBON	
	R905	QRD161J-223	22K	1/6W	CARBON	
	R906	QRD161J-223	22K	1/6W	CARBON	
	R907	QRD161J-562	5.6K	1/6W	CARBON	
	R908	QRD161J-562	5.6K	1/6W	CARBON	
	R909	QRD161J-103	10K	1/6W	CARBON	
	R910	QRD161J-103	10K	1/6W	CARBON	
	R911	QRD161J-223	22K	1/6W	CARBON	
	R912	QRD161J-223	22K	1/6W	CARBON	
	R913	QRD161J-223	22K	1/6W	CARBON	
	R914	QRD161J-223	22K	1/6W	CARBON	
	R915	QRD161J-223	22K	1/6W	CARBON	
	R916	QRD161J-223	22K	1/6W	CARBON	
	R917	QRD161J-102	1K	1/6W	CARBON	
	R918	QRD161J-102	1K	1/6W	CARBON	
	R919	QRD161J-104	100K	1/6W	CARBON	
	R920	QRD161J-104	100K	1/6W	CARBON	
	R921	QRD161J-472	4.7K	1/6W	CARBON	
	R922	QRD161J-472	4.7K	1/6W	CARBON	
	R923	QRD161J-104	100K	1/6W	CARBON	
	R924	QRD161J-104	100K	1/6W	CARBON	
	R925	QRD161J-104	100K	1/6W	CARBON	

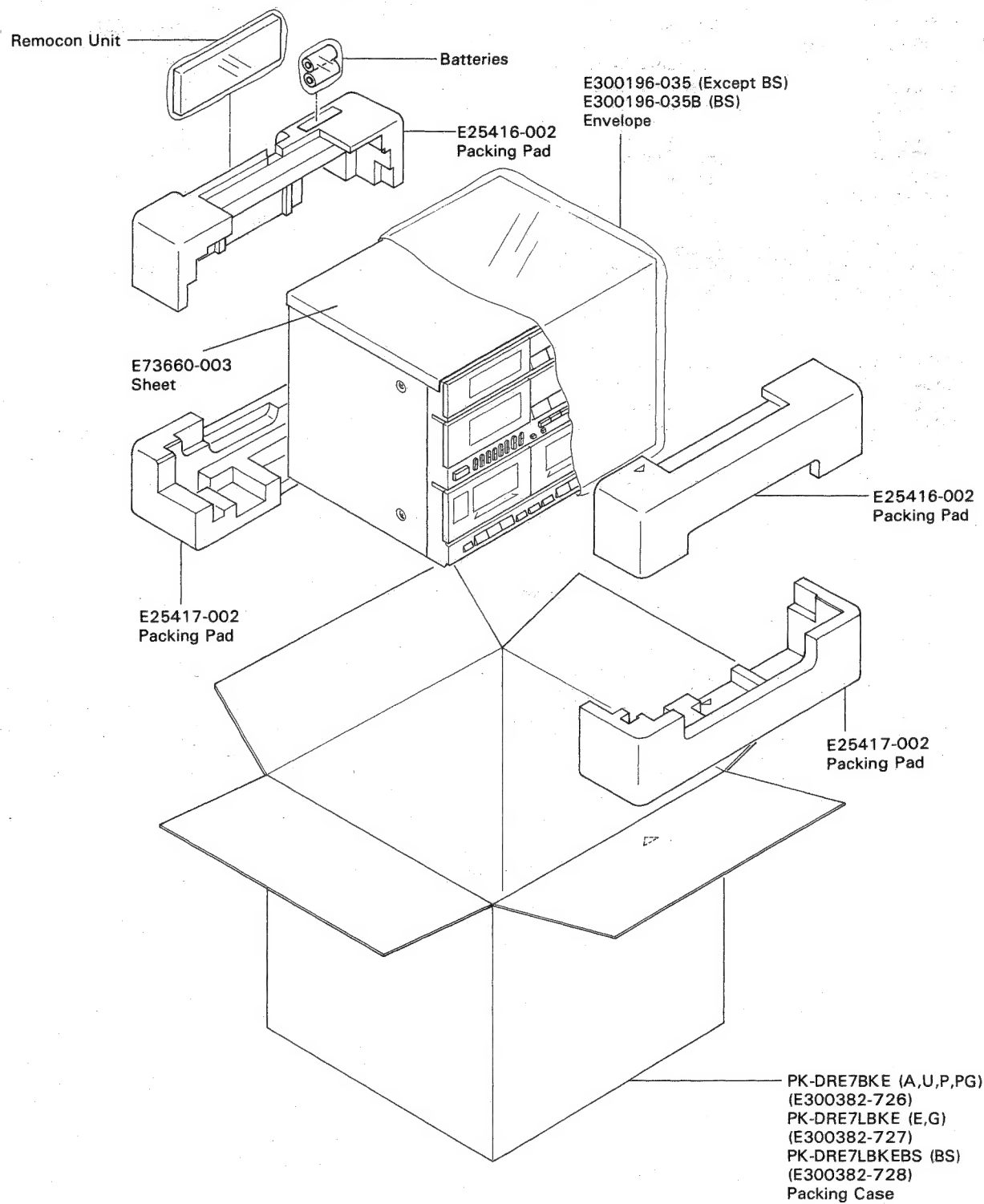
RESISTORS

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	R926	QRD161J-104	100K	1/6W	CARBON	
	R927	QRD161J-104	100K	1/6W	CARBON	
	R928	QRD161J-104	100K	1/6W	CARBON	
	R929	QRD161J-104	100K	1/6W	CARBON	
	R930	QRD161J-473	47K	1/6W	CARBON	
	R931	QRD161J-303	30K	1/6W	CARBON	C
	R932	QRD161J-303	30K	1/6W	CARBON	
	R933	QRD161J-272	2.7K	1/6W	CARBON	
	R934	QRD161J-272	2.7K	1/6W	CARBON	
	R935	QRD161J-153	15K	1/6W	CARBON	
	R936	QRD161J-153	15K	1/6W	CARBON	
	R937	QRD161J-104	100K	1/6W	CARBON	
	R938	QRD161J-104	100K	1/6W	CARBON	
	R939	QRD161J-392	3.9K	1/6W	CARBON	
	R940	QRD161J-392	3.9K	1/6W	CARBON	
	R941	QRD161J-223	22K	1/6W	CARBON	
	R942	QRD161J-223	22K	1/6W	CARBON	
	R943	QRD161J-561	560	1/6W	CARBON	
	R944	QRD161J-561	560	1/6W	CARBON	
	R945	QRD161J-102	1K	1/6W	CARBON	
	R946	QRD161J-102	1K	1/6W	CARBON	
	R947	QRD161J-680	68	1/6W	CARBON	
	R948	QRD161J-680	68	1/6W	CARBON	
	R949	QRD161J-103	10K	1/6W	CARBON	
	R950	QRD161J-472	4.7K	1/6W	CARBON	
	R951	QRD161J-102	1K	1/6W	CARBON	
	R952	QRD161J-102	1K	1/6W	CARBON	

OTHERS

△	ITEM	PART NUMBER	DESCRIPTION		AREA
	P901	EMV5101-013B	PLUG ASSY		C
	P902	EMV5101-009B	PLUG ASSY		
	P903	EMV5101-003B	PLUG ASSY		
		E11363-002	CIRCUIT BOARD		

Packing Materials and Part Numbers



The Marks for Designated Areas

A	Australia	BS	U.K.
E	Europe	P,PG	U.S. Military Market
G	West Germany	U	Other Countries

No mark indicates all areas.

Accessories List

△	Part Number	Part Name	Q'ty	Description	Areas
	E30580-1380A E30580-1380ABS BT20048B BT20029C BT20060	Instruction Book Instruction Book Warranty Card Warranty Card Warranty Card	1 1 1 1 1		Except BS BS P,PG A BS
	BT20064 BT20066 QPGA025-03503 QPGA025-03503B EQB4001-012	Warranty Card EEC Agency Envelope Envelope AM Loop Antenna	1 1 1 1 1		G G,BS Except BS BS
	E304084-001 EWP502-001 E72646-002 RM-SE7 UM-3(DJ)-2P	Loop Stand Bilt-in Antenna Spacer Ass'y Remote Control Battery	1 1 1 1 2		Except G
△	E35497-017 E35497-019 E04056 E67007-001	Caution Sheet Caution Sheet Siemens Plug Wire Antenna Ass'y	1 1 1 1	110 V 220 V	P PG,U PG,U G

△ : Safety parts

The Marks for Designated Areas			
A	Australia	BS	U.K.
E	Europe	P, PG	U.S. Military Market
G	West Germany	U	Other Countries

No mark indicates all areas.